12-03-1938: application no. a-1766: covering appropriation of water from; bright angel creek

Grand Canyon, Arizona.
December 3, 1938.

APPLICATION NO.: A-1766.

COVERING APPROPRIATION OF WATER FROM: Bright Angel Creek.

AMOUNT: 25,000 gals. per day for domestic use; 5 acre feet per annum for irrigation; and 2,000 gals. per day for stockwatering.

FOR USE AT: Fred Harvey facilities and Government campground at Phantom Ranch.

DATE OF FILING: May 15, 1937, at 9:00 a.m.

FILING FEE: $12.16, Receipt No. 3345, dated June 17, 1937.

PERMIT NO.: A-1094.

PERMIT DATED: June 29, 1937.

DATE OF PRIORITY: May 15, 1937.

DATE BY WHICH CONSTRUCTION SHALL BEGIN: Completed.

DATE BY WHICK CONSTRUCTION SHOULD BE COMPLETED: Completed.

DATE BY WHICH COMPLETE USE OF WATER SHALL BE MADE : On or before June 28, 1942.

FURTHER ACTION REQUIRED: Although construction work was actually completed at the time application for a permit was made, it was thought that there might be possible additions to or alterations in the existing system in the way of changing the size of the intake pipe, increasing storage capacity, bringing additional areas under irrigation, etc. For this reason the permit was made to read that complete application of water to the proposed use shall be made on or before June 28, 1942. If and when such additional construction work is started, there must be filed with the State Water Commission "Notice of beginning of Additional Construction", furthermore, on or before June 28, 1942, there must be filed with the State Water Commission formal "Notice of Proof of Appropriation of Water". In that connection, reference is made to Chief Engineer Blanchard's letter of August 16, 1937, in which he states that water from Bright Angel Creek was first used at Phantom Ranch for domestic purposes, irrigation and stockwatering in Febr ary, 1921. Upon filing of such "Notice of Proof of Appropriation of Water," and payment of the required fee ($3.50 at present), a Certificate of Water Right will be issued by the State Water Commission.

REMARKS: Copy of Application No. A-1766 (Permit No. A-1094) together with a copy of this summary is being sent to the Director, to Mr. M. C. Blanchard, Chief Engineer, A. T. & S. F. Railway, Coast Lines, and to Mr. Joseph B. Taylor. The original of all papers, receipts and documents in connection with this case is on file in my office.

M. R. TILLOTSON,
Superintendent.

WATER RESOURCES/WATER RI[illegible]3 DATE: September 26, 1973

WATER RIGHT/SOURCE DOCKET INFORMATION

REGION Western AREA Grand Canyon National Park

SITE Bright Angel Creek for Phantom Ranch

STATE Arizona COUNTY Coconino DOCKET NO WR #4

LOCATION NE¼ NW¼ Sec. 5, T31N, R3E G&SRB&M

REGIONAL BASIN LOCAL BASIN

ACQUIRED BY Appropriation

APPLICATION A-1766 PERMIT A-1094 (cancelled) CERTIFICATE

ACTION DUE PRIORITY September 23, 1941 RESERVATION January 11, 1908

QUANTITY see narrative (-0-) USE see narrative (None)

STATUS Inactive SOURCE creek

REMARKS Hydrologic Unit #15010002

NARRATIVE: On May 15, 1937, the National Park Service filed application A-1766. This application requested a permit to appropriate water from Bright Angel Creek, tributary to the Colorado River, for use at Phantom Ranch. On August 22, 1941, an ammended application A-1766 was filed, whose purpose was to change the point of the proposed diversion to another point on Bright Angel Creek. This application sought to divert 25,000 GPD for domestic use; 5 acre-/annum for irrigation; and 2,000 GPD for stockwatering. Ammended permit A-1094 was granted for this purpose on August 22, 1941.

Construction had begun on December 30, 1940, however. Several extensions of time finally gave the Park until April 22, 1956 to complete construction of the project and to make full application of the water to beneficial use. But there is no indication in the docket that this project was completed.

On February 23, 1941, an application was made by the NPS for a water supply to supplement the one projected under ammended application A-1766. This application--A-2511--was also for a diversion on Bright Angel Creek, in the following amounts: 40,000 GPD for domestic purposes, and 2000 GPD for stock watering. The water was to be used to supply the greater number of residents and visitors which was expected to come to the Park following the perfection of water rights under application A-1766. The new point of diversion was to be within the same section as the previous one. The docket does not indicate whether or not the project was undertaken or completed.

Phantom Ranch now draws its water from the Trans-Canyon pipeline. Application A-1766 is inactive.

The State Land Department sent to the Park an order to show cause why application A-1766 should not be cancelled. This matter was referred to this office on August 22, 1973, and on September 14 we made application for an extension of time to complete construction and make proof of appropriation.

On Oct. 28, 1974, the Arizona State Land Department cancelled Application No. A-1766 due to NPS lack of diligence in perfecting its water right. In a memo dated Nov. 14, 1974, the Service position was stated as follows: that any future water use in Grand Canyon National Park would fall under the Reservation Doctrine, making the loss of the State water right irrelevant.

A memo dated July 26, 1973, indicated that the NPS had withdrawn Application No. A-2511.

Kevin Kidder
June 30, 1976

Compiled by Wm. N. Murray

Approved by W. Werrell

Page 1 of 1

STATE LAND DEPARTMENT OF THE STATE OF ARIZONA
BEFORE THE STATE LAND COMMISSIONER

WR#4

IN THE MATTER OF APPLICATION TO APPROPRIATE WATER NO. **A-1766**
PERMIT NO. A-1094

Bright Angel Creek/Colorado River

Applicant, Grand Canyon National Park

ORDER OF CANCELLATION

Upon the files and records of the Arizona State Land Department, the State Land Commissioner, being fully advised in the premises, hereby makes the following findings of fact:

1. That Application to Appropriate Water No. **A-1766** was filed with the Arizona State Land Department on **May 15, 1937** . That the said Applicant has not proceeded with due diligence to perfect said Application to Appropriate Water and was Ordered to Show Cause, if any there be, on or before **September 17, 1973**, why said application should not be cancelled.

2. That said Applicant has not shown cause nor did Applicant appear to show cause why Application to Appropriate Water No. **A-1766** should not be cancelled and it is in the best interest of the State to cancel said application due to Applicant's lack of diligence.

NOW, THEREFORE, IT IS HEREBY ORDERED that Application to Appropriate Water No. **A-1766** heretofore filed by **Grand Canyon National Park, National Park Service, P.O. Box 36063, San Francisco, California 94102** , Applicant(s) be and the same hereby is cancelled.

This Order is subject to appeal as in such cases is provided by the laws of the State of Arizona.

GIVEN under my hand and the official seal of the Arizona State Land Department this **28th** day of **October** , 19 **74** .

SEAL

STATE LAND COMMISSIONER

64-74

BY CERTIFIED MAIL 569699

10-31-1974: stamp of receipt

Received
Division of Water Resources
OCT 31 1974

Name	Act	Info	File	Init

09-27-1973: letter to nps from state land department regarding extension of time on the commissioner's order to show cause on ap

JACK WILLIAMS
GOVERNOR

Arizona
State Land Department
1624 WEST ADAMS
PHOENIX, ARIZONA 85007
602 - 271-4634

ANDREW L. BETTWY
STATE LAND COMMISSIONER

September 27, 1973

Mr. Gustav W. Muehlenhaupt
Acting Regional Director
U. S. Department of the Interior
National Park Service
Western Region
Post Office Box 36063
San Francisco, California 94102

Dear Mr. Muehlenhaupt:

As per your request of September 14, 1973, find enclosed an extension of time on the Commissioner's Order To Show Cause on Application Nos. A-2823, A-1765, A-1880, A-3095, A-2601, A-2602, A-1878, A-1799, A-1881 and A-1766 to and including the 1st day of October, 1974.

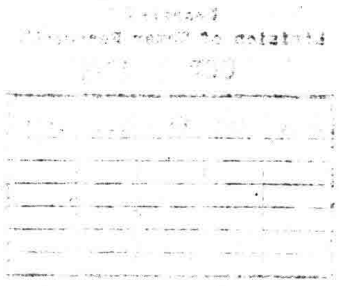
Very truly yours,

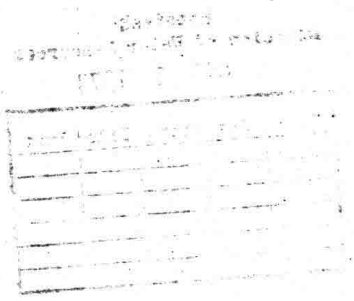
Wm Joe Melling

Wm. Joe Melling, Director
Water Rights Division

WJM/jaw

Enclosures





09-14-1973: letter to state land department from nps regarding extension of time regarding these applications

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WESTERN REGION
450 GOLDEN GATE AVENUE, BOX 36063
SAN FRANCISCO, CALIFORNIA 94102

IN REPLY REFER TO:

L54(WR)PSSW
Water Rights/General

September 14, 1973

State Land Commissioner
State Land Department of t
State of Arizona
1624 West Adams - 4th Floo
Phoenix, Arizona 85007

Dear Sir:

This is in response to your orders to show cause in regard to applications listed below. In accordance with the telephone conversation of August 29 between Mr. William Melling of your office and Mr. Gerard Witucki of this office, a request is hereby made for an extension of time regarding these applications.

In reviewing our files concerning these applications, we have determined that the water usages under the following permits continue to have regular and active use:

Application A-2823, Permit A-1987 for Lower Saddlehorse Springs in Grand Canyon National Monument.
Application A-1765, Permit A-1093 for Roaring Springs.
Application A-1880, Permit A-1194 for Bright Angel Creek for South Rim of the Grand Canyon.
Application A-3095, Permit A-2147 for Rio Puerco water system in Petrified Forest National Monument.
Application A-2601, Permit A-1829 for Cholla Spring #1 in Tonto National Monument.
Application A-2602, Permit A-1830 for Cholla Spring #2 in Tonto National Monument.

The following diversionary systems are in place, operable, and are being maintained on a standby basis for use during emergencies or while repairs are being made to the principal water-delivery systems:

Application A-1878, Permit A-1192 for Bright Angel Creek
Application A-1799, Permit A-1132 for the Bonita Canyon Springs water system at Chiricahua National Monument.

The systems to which the following permits refer have not been used regularly therefore; we have placed these water usages on our inactive list:

Application A-1881, Permit A-1195 for the Bright Angel Creek hydroelectric system for Phantom Ranch.
Application A-1766, Permit A-1094 for Bright Angel Creek for Phantom Ranch.

Substantial funds were expended in planning and construction for the projects related to these applications, and we believe that increasing Park visitation and expansion of facilities may someday require the implementation of these projects.

Sincerely,

SIGNED
Gustav W. Muehlenhaupt
Acting Regional Director

bc:
Ass't Regional Director, Arizona
Superintendent, GRCA
Superintendent, PEFO
Superintendent, TONTO NM
Superintendent, CHIRICAHUA NM
Field Solicitor, San Francisco
Field Solicitor, Arizona

(WR)PSSW:WNMurray:GSWitucki:mpm 9/14/73

STATE LAND DEPARTMENT OF THE STATE OF ARIZONA

BEFORE THE STATE LAND COMMISSIONER

IN THE MATTER OF APPLICATION NO. **A-1766** TO APPROPRIATE WATER

Re: Bright Angel Creek/Colorado River

Grand Canyon National Park, Applicant

ORDER TO SHOW CAUSE

The Arizona State Land Department, through its Water Rights Division, on lack of information that the above named applicant has complied with the requirements of ARS Section 45-150 relating to the completion of construction to appropriate surface waters, and further on the belief that the above named applicant has not complied with the requirements of Article I, Chapter IV, Rule 13 of the rules and regulations of the State Land Department governing surface waters, copy attached, HEREBY ORDERS that the above named applicant on or before **17th** day of **September**, 19**73**, personally or by verified writing appear and show cause why the State Land Department should not cancel the above numbered application to appropriate the certain waters herein described.

GIVEN under my hand and the Official Seal of the State Land Department this **13th** day of **August**, 19**73**.

ARIZONA STATE LAND DEPARTMENT

SEAL

Aubrey L. Bettwy

STATE LAND COMMISSIONER

Upon the written request of applicant, and due cause having been shown the date set for hearing the Order to Show Cause set forth above is hereby advanced to the_____day of_____, 19_____.

ARIZONA STATE LAND DEPARTMENT

_____

STATE LAND COMMISSIONER

BY CERTIFIED MAIL **570270**

07-26-1973: letter to state land department from acting regional director regarding application number a-2511

Witucki

Wallis

Mihan (has seen)

Actg Reg.Asso.Dir., PS

Actg Reg. Director

LS4(WR)ASW
GRCA/GEH
GRCA/Water Rights WR #4

July 26, 1973

Mr. Andrew L. Bettwy
State Land Commissioner
State Land Department of the
State of Arizona
1624 West Adams - 4th Floor
Phoenix, Arizona 85007

Dear Mr. Bettwy:

This is in response to your order to show cause in the matter of Application Number A-2511 to appropriate water (Bright Angel Creek-Colorado). The Park Service wishes to have Application Number A-2511 withdrawn. However, this request should not be construed as a waiver of any rights of the United States to the water described therein, or any other rights other than those derived from filing of the application.

(Sgd) John E. Cook

John E. Cook
Acting Regional Director
Western Region

bc:
Ass't Regional Director, Arizona
Superintendent, GRCA NP
Field Solicitor, San Francisco
Field Solicitor, Arizona

(WR)ASW:GSWitucki:mpm 7/26/73

07-02-1973: state land department of the state of arizona before the state land commissioner: in the matter of application no. a-25

STATE LAND DEPARTMENT OF THE STATE OF ARIZONA

BEFORE THE STATE LAND COMMISSIONER

IN THE MATTER OF APPLICATION NO. A-2511 TO APPROPRIATE WATER Bright Angel Creek/ Colorado River United States of America by Harold C. Bryant Superintendent of Grand Canyon National Park	)	ORDER TO SHOW CAUSE

Upon examining the files of the State Land Department, Water Rights Division, it appears that the above named applicants have failed to comply with certain rules and regulations of said Department.

THEREFORE, IT IS ORDERED, that **United States of America, by Harold C. Bryant, Superintendent of Grand Canyon National Park, Grand Canyon, Arizona** appear or show cause to the State Land Commissioner on or before **August 3, 1973** why the subject Application should not be cancelled.

GIVEN under my hand and the Official Seal of the State Land Department this **2nd** day of **July** 19 **73.**

S E A L

Aubrey Bettwy

STATE LAND COMMISSIONER

BY CERTIFIED MAIL 569795

19 - 73

11-13-1956: letter to state land department from chief regarding application a-2511, bright angel creek for phantom ranch

L54-L

November 13, 1956

Mr. C. H. W. Smith, Engineer
Surface Water Division
State Land Department
Phoenix, Arizona

Re: Application A-2511, Bright Angel Creek for Phantom Ranch Grand Canyon National Park

Dear Mr. Smith:

As stated in your letter of November 1, Application A-2511 was filed to cover the appropriation of water in excess of that authorized under Amended Application A-1766, Amended Permit A-1094, which was intercepted when the point of diversion was changed in 1941. Use of the additional water will not be made until all authorized water is used under Amended Permit A-1094, and you have granted an extension of time until August 22, 1961, in which to make full beneficial use of water under that permit because of the continued annual increase in water use and our resulting 10 year development program under "MISSION 66" to cope with the situation.

Accordingly, it is requested that you continue to hold Application A-2511 without issuing a permit until 1961, or such earlier date when we can make proof on Amended Permit A-1094 or determine the ultimate stable water demand for the Phantom Ranch area of Grand Canyon National Park.

Yours truly,

A. van V. Dunn
Chief, Water Resources Section

Copy to: Regional Director, Region Three, detached
Superintendent, Grand Canyon NP, detached
Western Office of Design and Construction, detached

COPY

L54

OFFICE OF
STATE LAND DEPARTMENT
STATE OF ARIZONA
PHOENIX, ARIZONA

November 1, 1956

Mr. A. van V. Dunn, Chief
Water Resources Branch
United States Department of the Interior
Washington 25, D. C.

Re: Application No. A-2511, Bright Angel Creek

Dear Mr. Dunn:

The above captioned application was filed by the Grand Canyon National Park on September 23, 1941, and has been reposing in our files without any action since that date.

From the information in the file, it appears that this application was filed as a supplement to Amended Application No. A-1766, Amended Permit No. A-1094, upon which an extension of time to August 22, 1961, within which to complete construction work and make complete application of water to beneficial use was granted in August of this year.

The points of diversion in Application A-2511 are the same as in Am. Application A-1766 and from correspondence in the file, it appears that it was the desire of the Grand Canyon National Park to hold Application A-2511 in abeyance until final proof was made on Am. A-1766. Amended Application A-1766 was for 25,000 gallons per day for domestic use; 5 acre feet per acre per annum for the irrigation of 17.7 acres and for stockwatering use, 2,000 gallons per day. Application No. A-2511 is for 40,000 gallons per day for domestic use and 2,000 gallons per day for stockwatering purposes.

The continually expanding use of the Park Service as explained in your letter of July 26th and referring to a 10-year program designated as "MISSION 66" creates, of course, an unusual situation. We believe it will be to the advantage of the Park Service to continue to hold Application No. A-2511 in our files without action until it is felt by you that the complete use under Amended Application No. A-1766 has been made.

If this suggested action complies with the desires of the Park Service, we should be glad to have a letter from you to that effect, whereupon Application No. A-2511 can be continued to be held without permit until said permit is requested by the Park Service.

Very truly yours,

/s/ C. H. W. Smith

C. H. W. Smith, Engineer
Surface Water Division

08-10-1956: before the state land commissioner of the state of arizona: in the matter of amended application no. a-1766 amended

Grand Canyon WR Colg 4 Docket 4

BEFORE THE STATE LAND COMMISSIONER OF THE STATE OF

ARIZONA

IN THE MATTER of Amended Application No. A-1766 Amended Permit No. A-1094 United States of America GRAND CANYON NATIONAL PARK Bright Angel Creek	COMMISSIONER'S ORDER GRANTING ADDITIONAL EXTENSION OF TIME.

The United States of America, Grand Canyon National Park, having by its Chief of Water Resources Branch, A. van V. Dunn, requested an extension of time within which to complete construction work and make complete appropriation of water to beneficial use under the terms of Amended Permit No. A-1094, granted pursuant to Amended Application No. A-1766, and the reasons submitted being considered good and sufficient cause therefor,

IT IS ORDERED, That the United State of America, Grand Canyon National Park, be, and it is hereby granted an addition extension of time, dating from August 22, 1956 to August 22, 1961, within which time to complete construction work and to make complete application of water to beneficial use under the terms of said Amended Permit No. A-1094.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Seal of the State Land Commissioner of the State of Arizona, this 10th day of August, A. D., 1956.

Kathryn Pitts
Acting Deputy State Land Commissioner

BEFORE THE STATE LAND COMMISSIONER OF THE STATE OF ARIZONA

IN THE MATTER

of

Amended Application No. A-1766
Amended Permit No. A-1094
United States of America
GRAND CANYON NATIONAL PARK
Bright Angel Creek

COMMISSIONER'S

ORDER GRANTING

ADDITIONAL EXTENSION OF TIME

The United States of America, Grand Canyon National Park, having by its Chief of Water Resources Branch, A. van V. Dunn, requested an extension of time within which to complete construction work and make complete appropriation of water to beneficial use under the terms of Amended Permit No. A-1094, granted pursuant to Amended Application No. A-1766, and the reasons submitted being considered good and sufficient cause therefor,

IT IS ORDERED, That the United States of America, Grand Canyon National Park, be, and it is hereby granted an additional extension of time from August 22, 1952, to August 22, 1956, within which to complete construction work and to make complete application of water to beneficial use under the terms of said Amended Permit No. A-1094.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Seal of the State Land Commissioner of Arizona, this 16th day of September, A. D., 1952.

James R. Burger

James R. Burger, Deputy
State Land Commissioner

07-26-1956: letter to state of arizona from chief, water resources section regarding water right application a-1766, permit a-1094

L 5 4

ACTION	
✓ Superintendent	
✓ Ass't. Supt.	
Admin. Officer	
✓ Chief Ranger	
Management Ass't.	
Engineer	
Naturalist	
✓ Forester	
✓ Landscape Archt.	
Architect	
✓ Files	

July 26, 1956

State Land Commissioner
Phoenix, Arizona

Re: Water Right Application A-1766,
Permit A-1094, Grand Canyon
National Park

Dear Sir:

Request is hereby made for a further extension of about five years time in which to complete construction and make proof of beneficial use of the waters of Bright Angel Creek at Phantom Ranch under the subject application and permit.

Since requesting the last extension of time on August 22, 1952, the annual number of visitors to Grand Canyon has increased from 688,673 in 1951 to 877,501 in the year ending September 30, 1956. As you have probably seen in the press releases, the increasing use of the parks and monuments is far exceeding any pre-war expectations, and the National Park Service is now embarked on a 10-year program, designated as MISSION 66, in which to revamp and complete public facilities to meet the demand.

The water system at Phantom Ranch is nominally complete, and most of the authorized quantity of water is now being used. However, it would be unwise to make proof at this time, with possibilities of changes within the next few years.

Very truly yours,

(SIGNED)

A. van V. Dunn
Chief, Water Resources Section

Copy to: Regional Director, Region Three - File in Docket No. 4
Superintendent, Grand Canyon NP - File in Docket No. 4
Western Office of Design and Construction

OFFICE OF
State Land Department
STATE OF ARIZONA
Phoenix, Arizona

W. W. LAN
STATE LAND COMMI

Water Divis

September 17, 1952

Re: L54 GRCA-L

Mr. A. van V. Dunn, Chief
Water Resources Branch
National Park Service
U. S. Department of the Interior
Washington 25, D. C.

COPY

Dear Mr. Dunn:

Re: Amended Application No. A-1766, Amended Permit No. A-1094
Bright Angel Creek - Grand Canyon National Park

In compliance with your request of recent date, we enclose herewith in duplicate, Commissioner's Order Granting Additional Extension of Time.

You will note that you have until August 22, 1956, within which to complete construction work and within which to make complete application of water to beneficial use of the water.

Very truly yours,

Kay Hammond, Secretary
Water Division

kh

Enclosure

08-22-1952: letter to state of arizona from nps regarding completion of the water system at grca covered by application no. a-1766

In reply refer to:
L54 GRCA-L

August 22, 1952

Mr. W. W. Lane
State Land Commissioner
Phoenix, Arizona

Dear Mr. Lane:

On August 8, 1945, we reported the completion of the water system at Grand Canyon National Park covered by Application No. A-1766, Permit A-1094. By letter of August 17, 1948, I requested an extension of time in which to permit the water use to reach an apparent maximum within the limits of quantity specified in the application and permit. By order of September 8, 1948, you granted an extension of time in which both to complete the water system, and to make full beneficial use of the water.

By letter of July 10, 1950, I advised that the water development plan would have to be altered, and requested another extension of time in which to modify the water system and make full beneficial use of the water. The extension of time was granted in the order of the Deputy State Land Commissioner on July 22, 1950. Construction is supposed to be completed by August 22, 1952, and beneficial use is to be fully made by the same date next year.

There has been a complete water system since the fact was reported in 1945, and water is being used. Some modifications have been made from time to time, to permit increasing water use as needed by the growing number of Park visitors. However, the authorized quantity of water is not yet used, but the quantity is increasing. There was a suggestion of stabilization when 1949 attendance was less than that of 1948, but there has been a marked increase in 1950 and 1951, as shown by the following records of total Park attendance for the travel years ending September 30 of each year:

1948	618,210	visitors
1949	605,331	"
1950	654,348	"
1951	688,673	"

As a result of these trends, it is impossible to predict what the ultimate water system needs at Phantom Ranch, or any other developed area of the Park will be. It would also be unwise to limit water rights to less than authorized quantities by considering any final proof at this time.

FILE COPY

Accordingly, request is hereby made for a further extension of time in which to determine ultimate needs, and make full use of the water.

Sincerely yours,

(SGD.) A. VAN V. DUNN.
A. van V. Dunn
Chief, Water Resources Branch

Copy to: Regional Director, Region Three (2)
Mr. P. Miller

AvanVDunn:sh

07-22-1950: letter to chief from state of arizona regarding amended application no. a-1766 permit no. a-1094

COPY

W. W. Lane
State Land Commissioner

Office of
STATE LAND DEPARTMENT
STATE OF ARIZONA
PHOENIX, ARIZONA

Bureau Reference
L54 GRAN

July 22, 1950

Mr. A. van V. Dun,
Chief, Water Resources Branch
National Park Service
Washington 25, D. C.

Re: Amended Application No. A-1766
Permit No. A-1094 - Bright Angel
Creek - Grand Canyon National Park

Dear Sir:

In compliance with your letter of July 10th, weare sending herewith Additional Extension of Time in the foregoing Application, from August 22, 1950 to August 22, 1952 for completions of construction work, and to August 22, 1952 for complete application of water to beneficial use.

Very truly yours,

(Sgd) C. H. W. Smith

Engineer, Water Division
State Land Department
of Arizona

Enclosure
s/j

07-22-1950: before the state land commissioner of the state of arizona: order granting additional extension of time

Re: L54 GRAN

BEFORE THE STATE LAND COMMISSIONER

OF THE STATE OF ARIZONA

In the Matter

of

Amended Application No. A-1766
Amended Permit No. A-1094
United States of America
Grand Canyon National Park
Bright Angel Creek

ORDER GRANTING

ADDITIONAL EXTENSION OF TIME

The United States of America, Grand Canyon National Park, having by its Chief of Water Resources Branch, A. van V. Dunn, requested an extension of time within which to complete construction work and make complete appropriation of water to beneficial use under the terms of Amended Permit No. A-1094, granted pursuant to Amended Application No. A-1766, and the reasons submitted being considered good and sufficient cause therefor,

IT IS ORDERED, That the UNITED STATES OF AMERICA, GRAND CANYON NATIONAL PARK, be, and it is hereby granted an additional extension of time from August 22, 1950, to August 22, 1952, within which to complete construction work; and from August 22, 1952, to August 22, 1953, within which to make complete application of water to beneficial use under the terms of said Amended Permit No. A-1094.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Seal of the State Land Commissioner of Arizona, this the 22d day of July, A. D. 1950.

James R. Bunger

DEPUTY STATE LAND COMMISSIONER

07-10-1950: letter to state of arizona from nps regarding request for extension of time

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON 25, D. C.

In reply refer to:
L54 GRAN

July 10, 1950

State Land Commissioner

Phoenix, Arizona

Dear Sir:

Request is hereby made for an extension of time in which to complete construction and make full beneficial use of the waters of Bright Angel Creek at the Phantom Ranch area of Grand Canyon National Park under amended Application No. A-1766, Permit A-1094.

This area was developed to approximately 35% of the proposed capacity before the war. There have been no further developments to date because:

1. Flood damages have made it necessary to alter the development plan.

2. The concessioner has found it expedient to defer construction of additional accommodations for the visitors pending negotiation of a new contract with the United States, the present 20-year contract expiring in 1952.

3. There has been uncertainty as to the trends of postwar public use.

4. Limitations imposed by restricted Congressional appropriations.

The development was approximately adequate for the visitors in 1941 when the total park attendance was 431,816 people. The total park attendance reached 611,318 visitors in 1947, which was slightly above the 605,881 visitors computed for the same year as a projection of the prewar trend. However, the attendance dropped back to 605,331 visitors in 1949 when it should have reached 678,000 visitors on the basis of the average trend for the 26 national parks whose prewar trends have been studied.

It is quite evident that the public facilities and water development are inadequate for postwar demand, but that enlargements cannot be made until the concessioner is assured of a proper return on the potential investment, and until Congress and the Bureau of the Budget determine that there is the proper priority for such Federal expenditures.

Sincerely yours,

(SGD.) A. VAN V. DUNN.
A. van V. Dunn
Chief, Water Resources Branch

Copy to: Regional Director, Region Three (2)

AvanVDunn:sh

09-08-1948: before the state land commissioner of arizona: in the matter of amended application no. a-1766, amended permit no.

BEFORE THE STATE LAND COMMISSIONER OF ARIZONA

In the Matter of Amended Application Number A-1766, Amended Permit Number A-1094, United States of America, Grand Canyon National Park. BRIGHT ANGEL CREEK

ORDER

GRANTING EXTENSION OF TIME.

The United States of America, Grand Canyon National Park, having by its Chief of Water Resources Branch, A. van V. Dunn, requested an extension of time within which to complete construction work and make complete application of water to beneficial use under the terms of Amended Permit No. A-1094, granted pursuant to Amended Application No. A-1766, and the reasons submitted being considered good and sufficient cause therefor,

IT IS ORDERED, That the UNITED STATES OF AMERICA, GRAND CANYON NATIONAL PARK, be, and it is hereby, granted an extension of time from August 22, 1947 to August 22, 1950, within which to complete construction work; and from August 22, 1948 to August 22, 1952, within which to make complete application of water to beneficial use under the terms of said Amended Permit No. A-1094.

This ORDER is made nunc pro tunc to serve as if made on August 22, 1947.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Seal of the State Land Commissioner of Arizona this 8th day of September, A.D. 1948.

J. C. Williams

STATE LAND COMMISSIONER

08-17-1948: letter to state of arizona from nps regarding request for extension of time

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
~~CHICAGO, ILLINOIS~~
Washington 25, D. C.

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

August 17, 1948.

State Land Commissioner,

Phoenix, Arizona.

Dear Sir:

This is to request an extension of time in which to complete full beneficial use of water under Water Right Application A-1766, Permit A-1094, for the appropriation of waters of Bright Angel Creek for use at Phantom Ranch in Grand Canyon National Park.

This water system is to serve the needs of the public and the concession operations maintained for public accommodations, and the quantity of water is based on the needs when annual visitation reaches a relatively static condition. At the present time there is still an annual increase in public attendance and the quantity of water used, and such consumption has not yet reached the full quantity authorized under the water right.

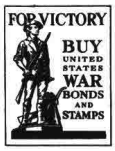
Extension of time, therefore, is requested, in order to permit further increase in water use or to obtain one or more years of water consumption in approximately the same quantities, as evidence of the lack of further public demand.

Very truly yours,

(SGD.) A. van V. Dunn

A. van V. Dunn,
Chief, Water Resources Branch.

cc: Regional Director, Region Three (2).



09-18-1946: letter to nps from state of arizona regarding granting extension of time for completion of construction work and compl

C O P Y

Office of
STATE LAND DEPARTMENT
STATE OF ARIZONA
Phoenix, Arizona

September 18, 1946

Mr. A. van V. Dunn
Chief Water Rights Division
U. S. Dept. of Interior
National Park Service
Chicago 54, Illinois

A-1766
P-A-1094

Dear Sir:

In accordance with your request of September 3, we enclose order, granting extension of time for completion of construction work and complete application of water to beneficial use under the terms of the above designated permit.

Very truly yours,

(Sgd) Tessie L. Flynn

TESSIE L. FLYNN
Secy-Water Division

TLF/ew
enc.

09-18-1946: before the state land commission of arizona: in the matter of amended application no. a-1766, amended permit no. a-

COPY

BEFORE THE STATE LAND COMMISSIONER OF ARIZONA

In the Matter of Amended Application Number A-1766, Amended Permit Number A-1094, United States of America, Grand Canyon National Park.

ORDER GRANTING EXTENSION OF TIME.

The United States of America Grand Canyon National Park, having by its Chief of Water Rights Division, A. van V. Dunn, requests an extension of time within which to complete construction work and make complete application of water to beneficial use under the terms of Amended Permit No. A-1094, grant pursuant to Amended Application No. A-1766, and the reasons submitted being considered good and sufficient cause therefor,

IT IS ORDERED, That the UNITED STATES OF AMERICA, GRAND CANYON NATIONAL PARK, be, and it is hereby, granted an extension of time from August 22, 1945, to August 22, 1947, within which to complete construction work; and from August 22, 1946, to August 22, 1948, within which to make complete application of water to beneficial use under the terms of said Amended Permit No. A-1094.

This ORDER is made nunc and pro tunc to serve as if made on August 22, 1945.

IN WITNESS WHEREOF, I have here unto set my hand and affixed the Seal of the State Land Commission of Arizona this 18th day of September, A.D. 1946.

O. C. WILLIAMS

(Sgd) O. C. Williams

STATE LAND COMMISSIONER

(SEAL)

08-08-1945: notice of completion of construction

NOTICE OF COMPLETION OF CONSTRUCTION

Amended

The United States of America, the permittee under Application No. A-1766, Permit No. A-1094, issued by the State Water Commissioner of the State of Arizona for the appropriation of the waters of Bright Angel Creek, tributary of the Colorado River
(Describe source of water supply)

for domestic, irrigation and stock watering
(State use of water)

in accordance with the terms of said permit, completed the construction of the works described therein the 30th day of June, 1945, being within the time fixed in said permit or extended by the State Water Commissioner for the completion of construction work.

Remarks: The system has been completed in accordance with the plan described in the application and is now in operation.
If the works have a less capacity than as described in the permit, or you have definitely abandoned your plan of irrigating any of the lands described in your permit, you should so state.

In Witness Whereof, I have hereunto set my hand this 8 day of August, 1945.

Merchandise Mart, Chicago 54, Ill.
(Present address)

United States of America
by:
(Signature of applicant)
Acting Direstor, National Park Service

Fill out, detach, and mail to the State Water Commissioner, Phoenix, Arizona.

09-03-1946: letter to state of arizona from nps regarding full beneficial use of water during this summer under amended water righ

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
CHICAGO, ILLINOIS

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

September 3, 1946.

Water Division,
State Land Department,
Phoenix, Arizona.

Dear Sirs:

We are supposed to prove full beneficial use of water during this summer under amended water right Application No. A-1766, amended Permit No. A-1094, at Grand Canyon National Park. This is to request an extension of time in which to make such proof because of the unusual conditions which have resulted from the war.

In order that combat agencies might function to the limit during the war, the United States did little or no construction and maintenance in its national parks. Since the close of hostilities, it followed much the same policy in order not to compete in the market for home building materials. As a result, even though park attendance has been generally higher this summer than in the last peak year of 1941, the facilities for water use have been below standard and cannot be brought to maximum production until after the immediate home building program is more advanced. In addition, although attendance is above that for 1941, it is not as great as it would be if motor car production were in balance with the demand.

Very truly yours,

A. van V. Dunn,
Chief, Water Rights Division.

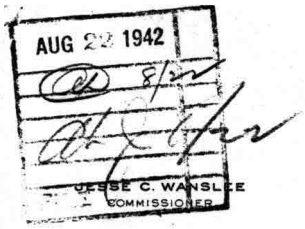
AvVD:sh.

cc: Grand Canyon National Park (2).



08-20-1942: letter to nps from state of arizona regarding application no. a-2511

STATE WATER COMMISSIONER
STATE HOUSE
PHOENIX, ARIZONA



August 20, 1942

Mr. A. Van V. Dunn
Hydraulic Engineer
National Park Service
601 Sheldon Building
San Francisco, California

Re: App. No. A-2511
Bright Angel Creek

Dear Sir:

Reference is made to your letter of the 18th relative to Application No. A-2511 of Grand Canyon National Park.

The date an application is filed in the office is the date of priority. In this case our record discloses that the filing was made September 23, 1941. The assigning of the number to the case, issuance of the receipt for the $3.00 examination fee and endorsement of the time of filing on the application are all evidence of the acceptance of the filing.

As the case now stands we are holding the application pending until the applicant advises us it is ready for us to proceed with our routine of giving notice of its pendency.

Sincerely yours,

Jesse C. Wanslee
State Water Commissioner

JCW:ETS:LC

08-18-1942: letter to state of arizona from hydraulic engineer regarding water right application a-2511

601 Sheldon Building

August 18, 1942.

State Water Commissioner,

Phoenix, Arizona.

Re: Water Right Application A-2511.

Dear Sir:

It is our understanding that our Water Right Application A-2511 for the appropriation of a supplemental supply from the well at Phantom Ranch on Bright Angel Creek in Grand Canyon is being held until we perfect the rights to the original quantity under amended Application A-1766. Will you please advise whether that means that no date of priority or acceptance has been noted and no permit granted. If an acceptance or receipt date was entered at the time the application number was assigned will you please send us that information.

Yours very truly,

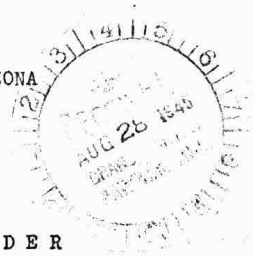
(Sgd) A. van V. Dunn

A. van V. Dunn,
Hydraulic Engineer.

08-17-1945: before the state land commissioner of arizona: in the matter of application no. a-1765, permit no. a-1093; granting ext

COPY

BEFORE THE STATE LAND COMMISSIONER OF ARIZONA
(Water Division)



In the Matter of

Application No. A-1765
Permit No. A-1093
Roaring Springs
United States of America
Grand Canyon National Park

ORDER

GRANTING EXTENSION OF TIME

The United States of America, Grand Canyon National Park, by its Acting Director Hillory A. Tolson, having requested an extension of time within which to complete construction work under the terms of Permit No. A-1093 granted pursuant to Application No. A-1765, and the reasons submitted by permittee being considered good and sufficient cause therefor,

IT IS ORDERED, That Permittee, United States of America, Grand Canyon National Park, be, and it is hereby granted an extension of time from December 31, 1945, to December 31, 1947, within which to complete construction work; and from December 31, 1945 to December 31, 1948, within which to make complete application of water to beneficial use under the terms of said Permit No. A-1093.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Seal of the State Land Commissioner this 17th day of August, A. D., 1945.

(SEAL)

(Sgd) O. C. Williams
State Land Commissioner

08-18-1942: letter to state of arizona from hydraulic engineer regarding water right application a-2511

601 Sheldon Building

August 18, 1942.

State Water Commissioner,

Phoenix, Arizona.

Re: Water Right Application A-2511.

Dear Sir:

It is our understanding that our Water Right Application A-2511 for the appropriation of a supplemental supply from the well at Phantom Ranch on Bright Angel Creek in Grand Canyon is being held until we perfect the rights to the original quantity under amended Application A-1766. Will you please advise whether that means that no date of priority or acceptance has been noted and no permit granted. If an acceptance or receipt date was entered at the time the application number was assigned will you please send us that information.

Yours very truly,

A. van V. Dunn,
Hydraulic Engineer.

03-10-1942: letter to nps from state of arizona regarding amended application no. a-1766, amended permit no. a-1094

STATE WATER COMMISSIONER
STATE HOUSE
PHOENIX, ARIZONA

MAR 12 1942
JESSE C. WANSLEE
COMMISSIONER

March 10, 1942

Mr. A. van V. Dunn
Hydraulic Engineer
National Park Service
601 Sheldon Building
San Francisco, California

Re: Amended Application No. A-1766
Amended Permit No. A-1094
Bright Angel Creek
United States of America
Grand Canyon National Park

Dear Sir:

In compliance with your request we have prepared a certified copy of the above designated permit and are enclosing the instruments together with your voucher for $2.80 which has been endorsed for services rendered.

Sincerely yours,

Jesse C Wanslee

JESSE C WANSLEE
STATE WATER COMMISSIONER

JCW:f
Enclosures

COPY

CERTIFICATE

I, Jesse C. Wanslee, State Water Commissioner of the State of Arizona, hereby certify that the foregoing is a full, true and correct copy of Amended Permit No. A-1094, granted pursuant to Amended Application No. A-1766, filed by The United States of America, Grand Canyon National Park, Grand Canyon, Arizona, as the same appears of record in the office of the State Water Commissioner of Arizona, in Book No. 10 of Applications for Permit.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Seal of the State Water Commissioner of Arizona, this 10th day of March, A. D., 1942.

/s/ Jesse C. Wanslee
STATE WATER COMMISSIONER

(SEAL)

Attached to appl. No. A-1766.

Application No. Am. a-1766 (ap)

Receipt No. 1258

Department of the State Water Commissioner

Phoenix, Arizona, March 19 1942

Received from Grand Canyon Nat. Park (Applicant's Name), Address Grand Canyon, Ariz.,

payment being made by (2) U. S. Treasurer (Applicant's Agent), Address San Francisco, Calif.

the sum of Two + 80/100 Dollars in payment of fee in connection with the above designated application as follows:

Examination	$	Certifying	$ 1.00
Filing and Recording	$	Blue Prints	$
Misc. Recording	$	C. W. R.—Recorder	$
Copying	$ 1.80		$

Cash
Check 13-51 #21,676 80
M. O.
Amount Rec'd $ 2
Payment $ —
Change $ —

Remarks Rec't mailed Asst. Supt. V. Dunn, Nat. Park Services 601 Sheldon Bldg — San Francisco

Municipal	$	Stock watering	$	STATE WATER COMMISSIONER
Domestic	$ —	Mining	$	
Irrigation	$ —	Power	$	By Jessie L. Flynn Jr. —


MAR 1942
FILE

COPY

CERTIFICATE

I, Jesse C. Wanslee, State Water Commissioner of the State of Arizona, hereby certify that the foregoing is a full, true and correct copy of Amended Permit No. A-1094, granted pursuant to Amended Application No. A-1766, filed by The United States of America, Grand Canyon National Park, Grand Canyon, Arizona, as the same appears of record in the office of the State Water Commissioner of Arizona, in Book No. 10 of Applications for Permit.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Seal of the State Water Commissioner of Arizona, this 10th day of March, A. D., 1942.

/s/ Jesse C. Wanslee
STATE WATER COMMISSIONER

(SEAL)

certified copy purchased because of reported loss of original
CAP

02-03-1942: letter to nps from state water commissioner, arizona regarding app. a-1766, per. a-1094; missing document and appr

STATE WATER COMMISSIONER
STATE HOUSE
PHOENIX, ARIZONA

FE 5 1942
2/5/42
JESSE C. WANSLEE
COMMISSIONER

February 3, 1942

Mr. A. Van V. Dunn
Hydraulic Engineer
National Park Service
601 Sheldon Building
San Francisco, California

Re: App. A-1766, Per. A-1094
Bright Angel Creek

Dear Sir:

Reference is made to your letter of the 31st ultimo inquiring about the permit in the case of Application No. A-1766, Permit No. A-1094.

We have examined file No. A-1766, which is the original filing on Bright Angel Creek, and file No. A-2511, the more recent filing on the same water, and the missing document is not in either of them. In our letter of August 23, 1941, addressed to Mr. H. C. Bryant, we advised Mr. Bryant of the approval of the Amended Application and state that the Permit is being enclosed with the letter.

The Cost of a certified copy of the application and permit will be $2.80.

Sincerely yours,

Jesse C. Wanslee
State Water Commissioner

JCW:ETS:LC

01-31-1942: letter to state water commissioner, arizona from hydraulic engineer regarding getting a duplicate copy of signature for

601 Sheldon Building

January 31, 1942.

Mr. Jesse C. Wanslee,
State Water Commissioner,
State House,
Phoenix, Arizona.

Dear Mr. Wanslee:

Reference is made to amended Water Right Application A-1766, Permit A-1094, for the appropriation of the waters of Bright Angel Creek for Phantom Ranch at Grand Canyon National Park, which was signed by you on August 22, 1941. This amended application and permit were received by the Superintendent of Grand Canyon, forwarded to us for making certain transcriptions on duplicate copies, and returned by us to the Superintendent during the early part of September.

This copy with your actual signature cannot now be located, and we wonder if by any chance it could have been returned to you with some of the subsequent correspondence relating to Application A-2511. If you do not find it in your files, will you please advise as to the proper procedure for obtaining a proper duplicate. We do not wish to order such a duplicate at this time, however, until we make a further check in the various federal files in Washington and elsewhere where the original may have been sent.

Superintendent Bryant of Grand Canyon has also referred to Application A-2511 at various times, and we assume that this is the application for a supplemental supply from the same well covered in Application A-1766. For verification will you please advise if that is the application number assigned to the application for the supplemental supply.

Yours very truly,

A. van W. Dunn,
Hydraulic Engineer.

AvVD:SH

FILE COPY

01-22-1942: letter to state water commissioner, arizona from nps regarding keeping application a-2511 pending for the time being

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZ.

January 22, 1942.

Mr. Edwin T. Stewart, Engineer,
State Water Commissioner,
State House,
Phoenix, Arizona.

Dear Mr. Stewart:

Reference is made to yours of January 9, 1942 relative to Application No. A-2511 - Bright Angel Creek.

We prefer to keep this application pending for the time being as it is impossible to prove full use due to abnormal decrease in travel to Phantom Ranch.

An effort will be made this coming summer to get some accurate figures on domestic water consumption with which we will be able to determine what our actual use and requirements are.

Thank you for calling this matter to our attention.

Sincerely yours,

(Sgd) H. C. Bryant

H. C. Bryant,
Superintendent.

cc: Hydraulic Engineer Dunn

C O P Y

STATE WATER COMMISSION
State House
Phoenix, Arizona

January 9, 1942.

Mr. John M. Davis
Acting Superintendent
Grand Canyon National Park
Grand Canyon, Arizona.

Re: App. No. A-2511
Bright Angel Creek

Dear Sir:

Reference is made to our letters of August 23rd and 28th relative to the above designated application.

We are now prepared to proceed with this application and issue the notices of its pending before the department, but believe it desirable to not do so until after the full amount of water is applied to use under Application No. A-1766, Permit No. A-1094 which covers water from the same source of supply.

Will you please advise us whether you prefer that we allow this application to remain pending or now give notice and proceed with our routine handling of the case.

Very truly yours,

(Sgd) Edwin T. Stewart
Engineer

09-23-1941: letter to state water commissioner, arizona from nps regarding application a-1766; notice of beginning of construction

Grand Canyon
Dead 22

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZ.

September 23, 1941.

Mr. Jesse C. Wanslee,
State Water Commissioner,
State House,
Phoenix, Arizona.

Dear Mr. Wanslee:

Reference is made to your letter of August 23 regarding amended application A-1766 for the appropriation of waters from Bright Angel Creek.

There is transmitted herewith notice of Beginning of Construction for the diversion of this water in accordance with a plan submitted with the application. The entire diversion has been completed to the point of operation and the water for irrigation, five-acre feet per annum, is being beneficially used. We do not yet have records indicating that the full amount of the water for domestic use and the watering of stock is being used. A statement will be submitted to you as soon as such records are available.

Sincerely yours,

C. M. Carrel,
Acting Superintendent.

cc: Director,
Regional Director,
A. Van V. Dunn.

09-23-1941: application for a permit to appropriate public waters of the state of arizona: bright angel creek

[redacted] Grand Canyon Nat Park

Permit No..... Application No.....

APPLICATION FOR A PERMIT

To Appropriate Public Waters of the State of Arizona

Filed September 23, 1941 at .....M.
(Applicant must not fill in the above blanks.)

I, The United States of America, by Harold C. Bryant, Superintendent of Grand Canyon National Park,
(Applicant's name as inserted here must agree with signature.)

of Grand Canyon, County of Coconino,
(Postoffice.)

State of Arizona, do hereby make application for a permit to appropriate the following described unappropriated waters of the State of Arizona.

1. The source of the proposed appropriation is Bright Angel Creek
(Name of stream or name of reservoir and stream if water is diverted from reservoir.)
, tributary of Colorado River

2. The amount of water which the applicant intends to apply to beneficial use is:

For Domestic use, 40,000 gallons per day
(Municipal or Domestic.) (Gallons per annum, or gallons per day.)

For ..... use, ...
(Irrigation.) (Acre feet per acre per annum.)

For Stock watering use, 2,000 gallons per day
(Mining or Stock Watering.) (Cubic feet per second, or gallons per annum.)

For ..... use, ... cubic feet per second.
(Power.)

For ..... use. .....

3. The point of diversion are located as follows in their relation to the SW corner
(State bearing and distance or coordinate distances to section or quarter section corner.)
Sec. 18, T. 31 N., R. 3 E., G. & S. R. M., as described in Application Amended Application A-1766:
B - NPS Line 16, 424 ft. North and 7848 ft. East of said corner, approximately in the SE¼ SW¼ of Sec. 32, T. 32 N., R. 3 E., G. & S. R. M.
D - Pump Line, 15,683 ft. North and 7401 ft. East of said corner, approximately

being within the NE¼ NW¼, of Sec. 5, T. 31 N
(State 40-acre subdivision of U. S. Government survey or projection thereof.) (No. N. or S.)
R. 3 E unsurveyed, G. & S. R. B. & M., in the County of Coconino
(No. E. or W.)

(Note—Complete paragraph below for all proposed uses of water, except irrigation.)

4. The water will be used for Domestic purposes in the E½ NW¼ and NE¼ SW¼,
(40 or 10 acre subdivision.)
of Sec. 5 and for Stock watering in the NE¼ NW¼ and NE¼ SW¼,
(40 or 10 acre subdivision.)
of Sec. 5, T. 31 N, R. 3 E. unsurveyed G. & S. R. B. & M., Coconino County, Arizona.

DESCRIPTION OF WORKS

5. **Diversion Works:** (a) Diversion will be by gravity, the diverting dam to be pipe 4 inches ——
diameter ——— feet in height (stream bed to overflow), 180 ft. long on top, and constructed of galvanized iron, placed
(Concrete, earth, brush, etc.)
in bed of channel, and from which water enters 2" GI main.

(b) Description of headgate There is no headgate on NPS pipe at Diversion B.
(Timber, concrete, etc., number and size of openings.)

(c) If water is to be pumped give general description .....
(Size and type of pump.)
See rider for Diversion D - Pump Line.
(Size and type of engine or motor to be used, total head water is to be lifted, etc.)

Do not use this form in making application for a permit to construct a reservoir and store water. A special form for this purpose may be obtained from the State Water Commissioner.

6. Conduit System. (a) Canal, ditch, flume: Width on top (at water line)..... feet; width at bottom..... feet; depth of water..... feet; length..... feet; grade..... feet per 1,000 feet; materials of construction.....

(Cross out two not used.)

(b) Pipe line: Diameter See rider inches; length..... feet; grade..... feet per 1,000 feet; total fall from intake to outlet..... feet; kind.....

(Riveted steel, cement, wood-stave, etc.)

NOTE—If different sizes or kinds of conduit are to be used, attach extra sheets with complete description, also show location of each clearly on map.

7. Distributing Works. See rider (No.) Material..... (Tanks or Troughs.) (State dimensions and capacity of each.)

8. Cost and Construction Schedule. The estimated cost of the proposed project is $15,000 under amended application A-1766.

It is proposed to begin construction within none under this application (Not over 1 year.) after the approval of this application, to complete construction within — (Not more than 5 years.) thereafter and to completely apply the water to the proposed use 5 years (State time in months or years.) after the ~~beginning of construction~~ perfection of rights under amended application A-1766.

DESCRIPTION OF PROPOSED USE

9. Domestic Use. Domestic use is proposed as follows: To provide supplemental supply for sanitary and culinary use of park employees and guests to serve increasing park attendance after perfection of rights under amended application A-1766. (Describe nature of use which may include the irrigation of gardens not exceeding one-half acre, stating number of persons and number of domestic stock to be served, etc.)

10. Municipal Use. To supply the city of....., having a present population of....., and an estimated population of..... in 19.....

11. Irrigation Use. (a) The land to be irrigated has an area of..... acres; is located in..... County, Arizona, and is particularly described by legal subdivisions as follows:

(Describe the subdivisions of the township or section the entire area of which it is proposed to irrigate, by the largest possible legal subdivisions, in the table below, inserting the area in the acreage column. In cases of irregular shaped parcels use a separate line to describe each 40 acre subdivision in which they occur and insert only the area of such subdivision to be irrigated in the acreage column.)

Tp.	Range	Sec.	SUBDIVISIONS	Number Acres To Be Irrigated

(If more space is required, attach separate sheet.)

(b) What is the character of the soil?.....

(c) What quantity of water is necessary to raise proposed crops?..... (Acre feet per acre per annum.)

(d) Land to be irrigated is owned by..... (Name of owner.) (If applicant is lessee, etc., so state.)

(e) The irrigation season will begin about..... (Beginning date each season.) and end about..... (Closing date each season.)

(f) Has the land to be irrigated any water right or source of water supply other than that herein applied for?..... Describe the nature and amount of any additional supply.....

12. Stock Watering Use. (a) What kind of stock is it proposed to serve? Horses and mules.

(b) What is the average number of stock it is proposed to serve? 100

(c) What is the maximum number of stock it is proposed to serve? 250.

(d) The use of water will begin about Jan. 1 (Beginning date each season.), and end about Dec. 31. (Closing date each season.)

Rider

5(a). B. The NPS diversion consists of 180 feet of 4" GI pipe, placed in the bed of Bright Angel Creek, and from which the water enters the 2" main.

5(c). Diversion D is from well 6 ft. in diameter and approximately 12 ft. deep, lined with locally cast masonry, and located and designed to derive its water supply from Bright Angel Creek by filtration through creek bank. Diversion is to be by two self-priming pumps with combined capacity of 30 gpm; direct connected to two electric motors, rated at 0.5 horse power each. The pump lift to distribution reservoir is 42 feet. The pump line is of 2" galvanized iron.

6(b). Both NPS and pump line pipes have diameter of 2 inches except as noted under question 5, and are of galvanized iron.

B. The NPS pipe line has length of 2825 feet, grade 14.8 feet per 1000 feet, and total fall of 42± feet.

D. The pump line will have length of 175 feet and pump lift of 42 feet.

7. The NPS distribution is from two 5000 gallon redwood tanks through pipes varying from 3/4" to 2" in diameter. Irrigation is through laterals similar to smaller main ditches.
The pump line will distribute from 40,000 gallon concrete reservoir through GI pipes varying from 3/4" to 2" in diameter, being same distribution previously used by Diversion A, which is now being superseded and abandoned.

13. Power Use. (a) The maximum amount of water to be used through the penstock is..... cubic feet per second.

(b) Total amount of power to be developed.....theoretical horsepower. (Second feet × fall ÷ 8.8.)

(c) Total fall to be utilized.....feet. (Pressure head.)

(d) The nature of the works by means of which the power is to be developed..... (Turbine, Pelton wheel, hydraulic ram, etc.)

(e) The works to be located, and the water to be released, in.....of Sec....., (40-acre subdivision.) T....., R....., G. & S. R. B. & M. (No. N. or S.) (No. E. or W.)

(f) Is water to be returned to any stream?.....If so, name stream and describe location of point where returned. ..... (Yes or No.) (Name of stream.) in the....., Sec....., T....., (40-acre subdivision.) (No. N. or S.) R....., G. & S. R. B. & M. (No. E. or W.)

(g) The use to which the power is to be applied is ..... (For distribution and sale or private use, etc.) ..... (Give general description of locality where power will be used.)

14. Mining Use. The mines to be served are.....known (Placer gold, lode gold, copper, etc.) as the..... (Names of claims or name of group.) located in....., Sec....., T....., R....., G. & S. R. B. & M. (40-acre subdivision.) (No. N. or S.) (No. E. or W.) and owned by.....

The method of utilizing the water is.....

Will the water be polluted by chemicals or otherwise?..... (Explain nature of pollution, if any.)

What disposition is made of water after use?..... (State if stored for reuse. If returned to a stream give name of stream and description of 40-acre tract to which returned.)

GENERAL

15. Are the maps required by the Rules and Regulations filed with Application?....No..... (Yes or No.) ~~If not, state specifically the time required for filing same.~~ Filed with amended application A-1766 previously.

16. The proposed point of diversion is on land of United States (National Park Service). (Insert name of owner, or state on Public Domain, National Forest, State Land, etc.)

17. The proposed conduit system is on land of United States (National Park Service). (Insert name of owner, or state on Public Domain, National Forest, State Land, etc.)

18. The land at the proposed place of use is owned by United States (National Park Service).

19. Post office used by those living near the proposed point of diversion is Grand Canyon, Arizona.

20. Of the applicant's knowledge, has the water described herein ever been appropriated, claimed or used by others?....Yes..... If so, file a statement herewith furnishing names of former appropriators or users of the water, and supporting applicant's claim that the water is now subject to appropriation. Fred Harvey, whose use is included in this application.

21. If the source of supply is a stream, state names and addresses of three water users from the stream below the proposed point of diversion; or, if there are no water users from stream below the proposed point of diversion, or if the source of supply is other than a stream, furnish the names and addresses of at least three residents of the vicinity familiar with the source of supply and the proposed use of water.

None.

Note: This application is to provide a supplemental supply to permit growth of the residence and attendance at Phantom Ranch after perfection of rights under amended application A-1766.

United States of America,
National Park Service

By /s/ H. C. Bryant Superintendent,
Signature of Applicant.
Grand Canyon National Park.

ORDER OF CORRECTION

STATE OF ARIZONA, }
County of Maricopa. } ss.

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for correction or completion, as follows:

In order to retain its priority, this application must be corrected, completed and refiled in the office of the State Water Commissioner on or before....., 19.....

WITNESS my hand and seal of office this.....day of....., 19.....

.....
State Water Commissioner.

Application No..... Permit No.....

PERMIT

STATE OF ARIZONA, }
County of Maricopa. } ss.

This is to certify that I have examined the foregoing application and do hereby approve the same, and grant to the applicant a permit to appropriate the water described therein subject to the following limitations and conditions:

The amount of water appropriated shall be limited to the amount which can be applied to beneficial use and shall not exceed.....

.....

.....

The priority of date under this permit is.....

Actual construction work shall begin on or before....., and shall be prosecuted with reasonable diligence and be completed on or before.....

Complete application of the water to the proposed use shall be made on or before.....

WITNESS my hand and seal of office this.....day of....., 19.....

.....
State Water Commissioner.

Application No......
Permit No......

PERMIT
To Appropriate Public Waters of the State of Arizona

District No......

This instrument was first received in the office of the State Water Commissioner at Phoenix, Arizona, on the.....day of.....,
19....., at.....o'clock.....M.

Returned to applicant for correction

.....

Corrected application refiled

.....

[redacted]oved

.....

Recorded in Book No.....of
Applications for Permit at page.....

.....
State Water Commissioner.

THE ARIZONA PRINTERY, INC.

Application No. A-2511 — Held by State Water Commissioner 4-28-44 (Cancelled)

660-0 E.

Receipt **No 1171**

Department of the State Water Commissioner

Phoenix, Arizona, Sept. 23, 1941

Received from U.S.N.P.S. Grand Canyon National Park (Applicant's Name), Address [illegible],

payment being made by [illegible] (Applicant's Agent), Address Albuquerque, N.M.,

the sum of Three + no/100 Dollars in payment of fee in connection with the above designated application as follows:

Examination	$3.00	Certifying	$
Filing and Recording	$	Blue Prints	$
Misc. Recording	$	C. W. R.—Recorder	$
Copying	$		$

Cash
Check 6,260 - 5351
M. O.
Amount Rec'd $3.00
Payment $
Change $

Remarks Rcpt mailed Harris A. Byrd Hill. 9-23-41

Municipal	$	Stock watering	$
Domestic	$	Mining	$
Irrigation	$	Power	$

STATE WATER COMMISSIONER

By [illegible]
Secretary

09-22-1941: notice of beginning of construction; application a-1766, permit a-1094

NOTICE OF BEGINNING OF CONSTRUCTION

I The United States of America, the permittee under Amended Application No. A-1766, Amended Permit No. A-1094, issued by the State Water Commissioner of the State of Arizona for the appropriation of the waters of Bright Angel Creek, tributary of the Colorado River
(Describe source of water supply)
for Domestic, Irrigation and Stock Watering
(State use of water)

in accordance with the terms of said permit, began the actual construction of the works described therein on the 30th day of December, 1940, being within the time fixed in said permit for the beginning of construction work.

Work was started by the excavation of the well, designated as Diversion D. The entire diversion has been completed to the point of operation, but minor adjustments and finishing touches are still being made. Diversion A has been removed.

The appropriator should state the manner of beginning construction work, number of men employed, the amount of work completed up to the date of this statement, and any additional information which may tend to show the beginning of work in good faith.

In Witness Whereof, I have hereunto set my hand this 22 day of September, 1941.

Grand Canyon, Arizona
(Present address)

Acting O. M. Darrel
Superintendent, Grand Canyon National Park.
(Applicant)

Fill out, detach, and mail to the State Water Commissioner, Phoenix, Arizona.

08-27-1941: letter to state water commissioner, arizona from assistant superintendent regarding voucher to cover examination fee

Dowling

660.05.7 Cox

August 27, 1941.

Mr. Jesse C. Wanslee,
State Water Commissioner,
Phoenix, Arizona.

Reference is made to your letter of August 23 in regard to amended application A-1766 for filing on water from Bright Angel Creek.

Enclosed herewith, for your signature, is voucher in the amount of $3.00 to cover examination fee for this permit.

Very truly yours,

(SGD.) JOHN M DAVIS

John M. Davis,
Assistant Superintendent.

D

FILE COPY

C O P Y

STATE WATER COMMISSIONER
STATE HOUSE
PHOENIX, ARIZONA

JESSE C. WANSLEE
COMMISSIONER

August 23, 1941

Mr. H. C. Bryant
Superintendent
Grand Canyon National Park
Grand Canyon, Arizona

Re: Am. Appl. A-1766, Am. Per. A-1094
Bright Angel Creek
Grand Canyon National Park

Dear Mr. Bryant:

Your letter of the 19th instant transmitting Amended Application No. A-1766 and a new application for permit to appropriate water from Bright Angel Creek is acknowledged.

We have approved Amended Application No. A-1766 and return the document herewith. Ample time has been allowed to complete the additional construction work due to changing one of the points of diversion and the time for making complete application of water has been set at five years from date of granting the Amended Permit.

We have charged no fee in the case of Amended Application No. A-1766, Amended Permit No. A-1094, but it will be necessary that you send us a voucher in the amount of $3.00 to cover the examination fee for the new application to appropriate water from Bright Angel Creek. The $5.00 voucher sent with the applications is returned herewith.

It is assumed that you have about completed full application of the water to beneficial use under Permit No. A-1094, and that you are now, or soon will be, able to make Proof of this use and receive a Certificate of Water Right. This Proof can be made when complete use of the water has been made regardless of the fact that we have allowed a long period of time for doing so in the Amended Permit.

The application for supplemented supply can be examined and considered for approval on receipt of the filing fee. However, in view of the fact that you want all the time it is possible to allow in which to apply the water to use, it may be advisable to not approve this application until Certificate of Water Right is issued under the original appropriation. The filing of the new application establishes the priority of the appropriation, but the time for completely applying the water to use dates from the approval of the application.

Sincerely yours,

/s/ Jesse C. Wanslee

Jesse C. Wanslee
State Water Commissioner

Original of this letter is in Grand Canyon Vault 22.

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZ.

August 19, 1941.

Mr. Jesse C. Wanslee,
State Water Commissioner,
State House,
Phoenix, Arizona.

Dear Mr. Wanslee:

In compliance with Engineer Stewart's letter of July 8, 1941 we submit an amended application A-1766 to supersede the rider submitted in July, and a new application to appropriate a supplemental supply of water for increasing water demands after license is granted on the original permit. The map, NP-GC-5120A, was submitted in July.

We enclose a voucher for $5.00 to cover the new application, in order to obtain immediate date of filing. We are not sure of the fee for amending application A-1766 and are, therefore, deferring such payment pending advice from you.

We agree with Mr. Stewart that the amendment of application A-1766 became quite complicated by the previous attempt to use a rider. We adopted this form, however, to insure the retention of the original date of filing and priority. Since you have subsequently considered it necessary to use a completely-rewritten form we wish to stress the fact that our first interest is in obtaining the right to change one point of diversion under this original permit priority.

We also agree with Mr. Stewart that the ultimate water demand will be in excess of the quantity claimed in the original application, and that in changing the point and method of diversion we are providing the ability to make these increased diversions. We feel, however, that to jeopardize a priority of four years standing. To eliminate this danger we have resorted to a separate application for a supplemental water supply.

You will note, too, that none of the supplemental supply will be used until the original claim is ready for license, and that due to the period of reconstruction we have had to request a slight extension of time for full use. Further, the supplemental use will be made at a decreasing annual rate of increase. Hence we wish as long a period for perfection as possible in order not to have to make needless requests for extension of time.

Sincerely yours,

John M. Davis,
Acting Superintendent.

RECORDED
COMPARED

Permit No. A-1094 Amended Application No. A-1766.

Amended Permit A-1094

AMENDED

APPLICATION FOR A PERMIT

To Appropriate Public Waters of the State of Arizona

Amendment Filed August 22, 1941 at 3:30 P. M.
Original Filed May 15, 1937, at 9:00 A. M.
(Applicant must not fill in the above blanks.)

The United States of America, by
I, Harold C. Bryant, Superintendent of Grand Canyon National Park,
(Applicant's name as inserted here must agree with signature.)

of Grand Canyon, County of Coconino,
(Postoffice.)

State of Arizona, do hereby make application for a permit to appropriate the following described unappropriated waters of the State of Arizona.

1. The source of the proposed appropriation is Bright Angel Creek
(Name of stream or name of reservoir and stream if water is diverted from reservoir.)
, tributary of Colorado River

2. The amount of water which the applicant intends to apply to beneficial use is:

For Domestic use, 25,000 gpd
(Municipal or Domestic.) (Gallons per annum, or gallons per day.)

For Irrigation use, 5 AF/A/Annum
(Irrigation.) (Acre feet per acre per annum.)

For Stock Watering use, 2,000 gpd
(Mining or Stock Watering.) (Cubic feet per second, or gallons per annum.)

For use, cubic feet per second.
(Power.)

For use.

3. The point~~s~~ of diversion are located as follows in their relation to the SW corner
(State bearing and distance or coordinate distances to section or quarter section corner.)
of Sec. 18, T. 31 N., R. 3 E., G. & S. R. M. A - Fred Harvey Line - Abandoned and superseded by diversion D; B - MPS Line 76.42 ft. North and 7.8 ft. East of said corner, approximately in the SE¼ SW¼ of Sec. 32, T. 32 N., R. 3 E., C - West Irrigation Ditch, 15,996 ft. North and 7801 ft. East of said corner, approximately in the SE¼ SW¼ of said Section 32. D - Pump Line (in lieu of A), 15683 ft. North and 7401 ft. East of said corner, approximately

~~being~~ within the NE¼ NW¼, of Sec. 5, T. 31 N.,
(State 40-acre subdivision of U. S. Government survey or projection thereof.) (No. N. or S.)
R. 3 E. unsurveyed, G. & S. R. B. & M., in the County of Coconino.
(No. E. or W.)

(Note—Complete paragraph below for all proposed uses of water, except irrigation.)

4. The water will be used for Domestic purposes in the E½ NW¼ and NE¼ SW¼,
(40 or 10 acre subdivision.)
of Sec. 5 and for Stock watering in the NE¼ NW¼ and NE¼ SW¼,
(40 or 10 acre subdivision.)
of Sec. 5, T. 31 N., R. 3 E., unsurveyed G. & S. R. B. & M. Coconino County, Arizona.
and for irrigation as described under question 11

DESCRIPTION OF WORKS

5. **Diversion Works:** (a) Diversion will be by gravity, the diverting dam to be feet in height (stream bed to overflow), long on top, and constructed of
(Concrete, earth, brush, etc.)
See rider for Diversions B and C.

(b) Description of headgate
(Timber, concrete, etc., number and size of openings.)
See rider for Diversions B and C.

(c) If water is to be pumped give general description
(Size and type of pump.)
See rider for Diversion D.
(Size and type of engine or motor to be used, total head water is to be lifted, etc.)

Do not use this form in making application for a permit to construct a reservoir and store water. A special form for this purpose may be obtained from the State Water Commissioner.

See rider

6. Conduit System. (a) Canal, ditch, flume: Width on top (at water line)..... feet; width at bottom..... feet; depth of water..... feet; length..... feet; grade..... feet per 1,000 feet; materials of construction.....

(Cross out two not used.)

(b) Pipe line: Diameter..... inches; length..... feet; grade..... feet per 1,000 feet; total fall from intake to outlet..... feet; kind.....

(Riveted steel, cement, wood-stave, etc.)

NOTE—If different sizes or kinds of conduit are to be used, attach extra sheets with complete description, also show location of each clearly on map.

7. Distributing Works. ..... (No.) ..... (Tanks or Troughs.) Material ..... (State dimensions and capacity of each.)

See rider.

8. Cost and Construction Schedule. The estimated cost of the proposed project is $15,000

It is proposed to begin construction of Diversion D within 2 months after the approval of this application, to complete construction within 1 year thereafter and to completely apply the water to the proposed use 2 years after the beginning of construction.

(Not over 1 year.) (Not more than 5 years.) (State time in months or years.)

DESCRIPTION OF PROPOSED USE

9. Domestic Use. Domestic use is proposed as follows: Sanitary, culinary, fire protection, and other incidental needs of 50 permanent residents and a motel or lodge providing accommodations for 100 guests and 100 to 300 transients.

(Describe the nature of use which may include the irrigation of garden not exceeding one-half acre, stating number of persons and number of domestic stock to be served, etc.)

10. Municipal Use. To supply the city of..... having a present population of....., and an estimated population of..... in 19.....

11. Irrigation Use. (a) The land to be irrigated has an area of 17.7 acres; is located in Coconino County, Arizona, and is particularly described by legal subdivisions as follows:

(Describe the subdivisions of the township or section the entire area of which it is proposed to irrigate, by the largest possible legal subdivisions, in the table below, inserting the area in the acreage column. In cases of irregular shaped parcels use a separate line to describe each 40 acre subdivision in which they occur and insert only the area of such subdivision to be irrigated in the acreage column.)

Tp.	Range	Sec.	SUBDIVISIONS	Number Acres To Be Irrigated
			Approximate subdivisions in unsurvsyed land	
32N	3 E	32	SE¼ of SW¼	0.20
31N	3 E	5	NE¼ of NW¼	6.86
31N	3 E	5	SE¼ of NW¼	5.52
31N	3 E	5	NE¼ of SW¼	5.12
			Total	17.70

(If more space is required, attach separate sheet.)

(b) What is the character of the soil? Sand and boulders with small amount of loam.

(c) What quantity of water is necessary to raise proposed crops? 5 AF/A/Annum (Acre feet per acre per annum.)

(d) Land to be irrigated is owned by The United States (National Park Service). (Name of owner.) (If applicant is lessee, etc., so state.)

(e) The irrigation season will begin about April and end about October (Beginning date each season.) (Closing date each season.)

(f) Has the land to be irrigated any water right or source of water supply other than that herein applied for? No Describe the nature and amount of any additional supply.....

12. Stock Watering Use. (a) What kind of stock is it proposed to serve? Horses and mules

(b) What is the average number of stock it is proposed to serve? 75

(c) What is the maximum number of stock it is proposed to serve? 250

(d) The use of water will begin about Jan. 1, and end about Dec. 31 (Beginning date each season.) (Closing date each season.)

I JED
C D

Rider

5(a). A. Diversion A is to be superseded by Diversion D and abandoned as the main feature of this amendment.

B. The NPS diversion consists of 180 feet of 4" GI pipe, placed in the bed of Bright Angel Creek, and from which the water enters the 2" main.

C. The diversion for the West Irrigation Ditch is from small riprapped catch basin, 30 feet long extending into creek bank from main channel.

The East Irrigation Ditch Diversion consists of a simple wooden check and turnout to throw water from overflow channel of distribution reservoir formerly served from Diversion A and now to be served by Diversion D. It is merely further use under Diversion D.

5(b). There is no headgate on the NPS pipe line. The West Ditch Diversion includes a standard irrigation sluice gate. The East Ditch is controlled by timber check and turnout.

5(c). Diversion D is from well 6 ft. in diameter and approximately 12 ft. deep, lined with locally cast masonry, and located and designed to derive its water supply from Bright Angel Creek by filtration through creek bank. Diversion is to be by two self-priming pumps with combined capacity of 30 gpm; direct connected to two electric motors, rated at 0.5 horse power each. The pump lift to distribution reservoir is 42 feet. The pump line is of 2" galvanized iron.

6(a). The first 600 feet of the West Ditch have a top width of 5± feet, bottom width of 2 feet, depth 1.5 feet, and variable grade. The remainder of ditch has top width of 3.5 feet, bottom width of 1.5 feet, depth 1.0 foot, length 3200 feet, with variable grade and minimum of 4 feet per 1000 feet. The East Ditch has top width of 3.5± feet, bottom width of 1.5 feet, depth 1.0 foot, length 1650 feet, grade variable with minimum of 19.3 feet per 1000 feet.

Laterals permit interchange of water between the East and West Ditches.

6(b). Both NPS and pump line pipes have diameter of 2 inches except as noted under question 5, and are of galvanized iron.

B. The NPS pipe line has length of 2825 feet, grade 14.8 feet per 1000 feet, and total fall of 42± feet.

D. The pump line will have length of 175 feet and pump lift of 42 feet.

7. The NPS distribution is from two 5000 gallon redwood tanks through pipes varying from 3/4" to 2" in diameter. Irrigation is through laterals similar to smaller main ditches.
The pump line will distribute from 40,000 gallon concrete reservoir through GI pipes varying from 3/4" to 2" in diameter, being same distribution previously used by Diversion A, which is now being superseded and abandoned.

This amended application is made and filed by the applicant for the purpose of acquiring the right to change the point of diversion A to point D and abandoning point A. The same water, in the same quantity, is involved at both diversions and the place and purpose of use is unchanged. Extension of time is requested to make the change and complete full beneficial use.

13. Power Use. (a) The maximum amount of water to be used through the penstock is..... cubic feet per second.

(b) Total amount of power to be developed.....theoretical horsepower.
(Second feet × fall ÷ 8.8.)

(c) Total fall to be utilized.....feet.
(Pressure head.)

(d) The nature of the works by means of which the power is to be developed.....
(Turbine, Pelton wheel, hydraulic ram, etc.)

(e) The works to be located, and the water to be released, in.....of Sec....., T....., R....., G. & S. R. B. & M.
(40-acre subdivision.) (No. N. or S.) (No. E. or W.)

(f) Is water to be returned to any stream?.....If so, name stream and describe location of point where returned. .....in the....., Sec....., T....., R....., G. & S. R. B. & M.
(Yes or No.) (Name of stream.) (40-acre subdivision.) (No. N. or S.) (No. E. or W.)

(g) The use to which the power is to be applied is .....
(For distribution and sale or private use, etc.)
.....
(Give general description of locality where power will be used.)

14. Mining Use. The mines to be served are.....known
(Placer gold, lode gold, copper, etc.)
as the.....
(Names of claims or name of group.)
located in....., Sec....., T....., R....., G. & S. R. B. & M.
(40-acre subdivision.) (No. N. or S.) (No. E. or W.)
and owned by.....
The method of utilizing the water is.....
Will the water be polluted by chemicals or otherwise?.....
(Explain nature of pollution, if any.)
What disposition is made of water after use?.....
(State if stored for reuse. If returned to a stream give name of stream and description of 40-acre tract to which returned.)

GENERAL

15. Are the maps required by the Rules and Regulations filed with Application?.....Yes..... If not, state specifically the time required for filing same.....
(Yes or No.)

16. The proposed point of diversion is on land of United States (National Park Service).
(Insert name of owner, or state on Public Domain, National Forest, State Land, etc.)

17. The proposed conduit system is on land of United States (National Park Service).
(Insert name of owner, or state on Public Domain, National Forest, State Land, etc.)

18. The land at the proposed place of use is owned by United States (National Park Service).

19. Post office used by those living near the proposed point of diversion is Grand Canyon, Arizona.

20. Of the applicant's knowledge, has the water described herein ever been appropriated, claimed or used by others?.....Yes..... If so, file a statement herewith furnishing names of former appropriators or users of the water, and supporting applicant's claim that the water is now subject to appropriation. Fred Harvey, as lessee, whose use is included in this claim.

21. If the source of supply is a stream, state names and addresses of three water users from the stream below the proposed point of diversion; or, if there are no water users from stream below the proposed point of diversion, or if the source of supply is other than a stream, furnish the names and addresses of at least three residents of the vicinity familiar with the source of supply and the proposed use of water.

None.

United States of America,
National Park Service

By /s/ H. C. Bryant Superintendent,
Signature of Applicant.

Grand Canyon National Park.

ORDER OF CORRECTION

STATE OF ARIZONA, }
County of Maricopa. } ss.

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for correction or completion, as follows:

In order to retain its priority, this application must be corrected, completed and refiled in the office of the State Water Commissioner on or before....., 19.....

WITNESS my hand and seal of office this.....day of....., 19.....

State Water Commissioner.

Amended Application No. A-1766 AMENDED RECORDED COMPARED Amended Permit No. A-1094

PERMIT

STATE OF ARIZONA, }
County of Maricopa. } ss.

This is to certify that I have examined the foregoing application and do hereby approve the same, and grant to the applicant a permit to appropriate the water described therein subject to the following limitations and conditions:

The amount of water appropriated shall be limited to the amount which can be applied to beneficial use and shall not exceed Twenty Five Thousand (25,000) gallons per day for Domestic Use, Five (5) acre feet per acre per annum for Irrigation, and Two Thousand (2,000) gallons per day for Stock Watering purposes.

The priority of date under this permit is May 15, 1937.

Actual construction work shall begin on or before August 22, 1942, and shall be prosecuted with reasonable diligence and be completed on or before August 22, 1945

Complete application of the water to the proposed use shall be made on or before August 22, 1946.

WITNESS my hand and seal of office this 22nd day of August, 19 41.

/s/ Jesse C. Wanslee
State Water Commissioner.

Amended Application No. A-1766
Amended Permit No. A-1094

PERMIT
To Appropriate Public Waters of the State of Arizona

District No.

This instrument was first received in the office of the State Water Commissioner at Phoenix, Arizona, on the 22nd day of August, 19 41, at 3:30 o'clock P. M. Original Application No. A-1766 filed May 15, 1937
Returned to applicant for correction at 9:00 A. M.
Corrected application refiled
Approved August 22, 1941.
/s/ Jesse C. Wanslee
Recorded in Book No. 10 of Applications for Permit at page 1766
/s/ Jesse C. Wanslee
State Water Commissioner.

THE ARIZONA PRINTERY, INC.

07-16-1941: letter to state water commissioner, arizona from hydraulic engineer regarding request a supply of about 20 new applic

July 16, 1941.

Hon. Jesse C. Wanslee,
State Water Commissioner,
407 Arizona State Building,
Phoenix, Arizona.

Dear Sir:

Reference is made to your letter of July 8 to Superintendent Frank A. Kittredge of Grand Canyon regarding Water Right Application A-1766, Permit A-1094, in which Engineer Edwin T. Stewart suggests that the amendments should be covered by a new application instead of by the rider as you previously suggested.

The same letter advises that you have a new form of application which was sent to the Superintendent for use. The application form was not forwarded to us with the copy of your letter and we shall endeavor to get them for immediate use, but we should also like to request a supply of about 20 of the new forms for our future use in connection with the water right applications for the State of Arizona.

Yours very truly,

A. van V. Dunn,
Hydraulic Engineer.

AvVD:SH

FILE COPY

7/9/41
- re Cancel for action
dr

STATE WATER COMMISSIONER

STATE HOUSE
PHOENIX, ARIZONA

JESSE C. WANSLEE
COMMISSIONER

July 8, 1941

Mr. Frank A. Kitteredge, Superintendent
Grand Canyon National Park
Grand Canyon, Arizona

Re: App. No. A-1766, Per. No. A-1094
Bright Angel Creek
Grand Canyon National Park

Dear Mr. Kitteredge:

We have examined the rider enclosed with your letter of June 13th which you submit for the purpose of amending Permit No. A-1094, granted pursuant to Application No. A-1766.

After comparing the proposed changes with our record we are of the opinion that there should be a complete new application prepared and filed as an amended application. We find it will be difficult, if not impossible, to show the changes on our record, and before such changes are made, if it were possible to make them, the original permit should be changed and submitted to us. In other words, the permit and our record must agree.

Except for the changes you desire to make the amended application will be identical with the original. There appears to be some crowding of typewritten matter in the blank spaces of the form which probably can be improved in the preparation of the amended application. For instance, we think that paragraph 3 can be rearranged, but if it cannot be shortened, reference can be made in this paragraph to the rider and the points of diversion described there as has been done with the description of diversion works in paragraph 5.

We believe it desirable that some reference be made in the amended application to the abandoned point of diversion and the reason for abandoning it and that the other reasons for filing the amended application be stated. A statement in about the following form can be made on the rider:

This amended application is made and filed by the applicant primarily for the purpose of abandoning the point of diversion designated as A in the original application and acquiring the right to divert water from Bright Angel Creek at diversion point D., and for the purpose of increasing the quantity of water appropriated and securing an extension of time in which to complete construction work and to make complete application of the water to beneficial use. (Also refer to any other changes you may make.)

We note your statement that you will eventually require more water from the source of supply covered by this Permit. In this connection would it not be advisable while you are amending the application to increase the amount of the appropriation to your anticipated requirements in the next five or ten years? The Commissioner will allow five years from the date of granting the amended permit in which to make complete application of water, and has the authority to extend this time beyond the five year period. This is about as close as we can approach municipal use in a case of this kind as we do not believe the use is the same as that of a municipality.

In event you do not desire to increase the quantity of water in the amended application and prefer to make proof of appropriation at an early date, and secure a Certificate of Water Right under the present permit, then make a new filing for additional water, we have no objections to this procedure. The map submitted will serve for the new application if there are no changes in points of diversion and places of use.

You will observe that the blank forms we enclose differ somewhat from the form used to prepare the original application in this case. Paragraph 4 now describes the place of using water instead of describing the conduit system.

We enclose a partially completed rough draft of the amended application indicating a few proposed changes we think desirable.

Sincerely yours,

Edwin T. Stewart

Edwin T. Stewart
Engineer

ETS:LC
Encs.

660-057

June 13, 1941.

Mr. Jesse C. Wanslee,
State Water Commissioner,
Phoenix, Arizona.

Re: Application No. A-1766, Permit No. A-1094, Bright Angel Creek, Grand Canyon National Park.

Dear Mr. Wanslee:

Reference is made to your letter of April 8, 1941, to Hydraulic Engineer A. van V. Dunn of our Water Rights Section, relating to necessary amendments in our Water Right Application A-1766, Permit No. A-1094, for Grand Canyon National Park.

We have decided to make the amendment in the form of a rider as you offer as the first of two alternate methods of procedure. We enclose this rider, together with a tracing and blue-print of drawing No. NP/GC 5120A, being a revision of NP/GC 5120 now on file with the original application and permit. This letter is also a request for extension of time to reconstruct and fully use the water granted by the permit.

In plain terms, our original diversion for the Fred Harvey system proved too expensive to maintain and difficult to operate at times of high water. The change is purely to eliminate these undesirable flood features.

You further suggest that we should be sure that we have included all changes which may be necessary. We gather that you consider it much easier to approve changes during the permit state of development than after the license is issued. We have no further change planned at the moment, and will have to rely on successful change in point after being licensed if we find the other three diversions in the present permit develop flood problems.

We do know, however, that on perfection of the present right we will still have a need for more water for increasing tourist attendance. The amount of increase will depend on factors beyond our control, just as at our two villages of Grand Canyon and Kaibab Post Office, for which we have municipal rights and claims. We assume that a new

application for supplemental water from the same system may be filed and perfected without further map. We expect to make such an application when proving beneficial use under the existing right, and should like to know what your reaction would be to our claiming municipal status for the supplemental supply. Our point is that we can prove up on the Permit A-1094 in the near future, but the use of the supplemental supply will increase slowly and relatively indefinitely.

Please send a copy of any reply you make to this letter to Mr. Dunn in San Francisco, as well as to us.

It is not clear from the manual just what fees should accompany this application. A voucher will be sent on receipt of further information from you.

Very truly yours,

F. A. KITTREDGE,
Superintendent.

04-08-1941: letter to nps from state of arizona regarding application no. a-1766, per. no. a-1094

Copy for Supt. Director Reg. III sent 6/6/41

APR 10 1941

4/14

JESSE C. WANDELL
COMMISSIONER

STATE WATER COMMISSIONER
STATE HOUSE
PHOENIX, ARIZONA

April 8, 1941

Mr. A. Van V. Dunn
Hydraulic Engineer
National Park Service
San Francisco, California

Re: App. No. A-1766, Per. No. A-1094
Bright Angel Creek
Grand Canyon National Park.

Dear Sir:

Reference is made to your letter of the 3rd instant relative to changing the point of diversion in the case of Application No. A-1766, Permit No. A-1094, Grand Canyon National Park, Bright Angel Creek.

On examination of our record of this case we find that it is yet in the permit stage, no Certificate of Water Right having as yet been issued, so we will not require anything more than an amendment of the application and permit.

We note, however, that there are three points of diversion described in paragraph three of the application which raises the question as to which diversion you desire to change, or if there will be changes in more than one of them.

We suggest that you examine the Permit and map in the case and then advise us to the changes which must be made or, if you prefer, you may submit an amended application in which you make the changes necessary to describe the new point of diversion and new manner of diversion, referring to the use of a pump if one is to be used in lieu of gravity diversion. The changes mentioned in your letter will require a correction in paragraph three and a change in the rider under A. B. C or D. of 5(a). While these corrections are being made it may be well that the entire application be checked for other changes or corrections that may be found desirable.

Copies mailed Director Reg. III Supt. Kittredge 6/6/41

Mr. A. Van V. Dunn - page 2.

In preparing the amended application we suggest that a brief statement be inserted as to the reasons for making and filing the amendment. This statement may appear in the rider.

Sincerely yours,

Jesse C. Wanslee
State Water Commissioner

JCW:ETS:LC

April 3, 1941.

Hon. Jesse C. Wanslee,
State Water Commissioner,
State Building,
Phoenix, Arizona.

Dear Sir:

In the case of our water system for Phantom Ranch at Grand Canyon, Water Right Application A-1766, Permit A-1094, we have found that it is difficult to maintain diversion works because of damage from floods. We propose to change to a shallow well just out of the flood area to divert the same water as underground stream flow.

Will you please send us six or more copies of the forms necessary to change the point of diversion, and any instructions and regulations which you have for making an application for such a change.

Yours very truly,

A. van V. Dunn,
Hydraulic Engineer.

AvVD:SH

07-14-1937: letter to state of arizona from nps regarding receipt of communications and enclosures

RECD JUL 16 1937

July 14, 1937.

State Water Commissioner,
Room 407, Arizona State Building,
Phoenix, Arizona.

Dear Mr. Stewart:

Receipt is acknowledged of the following communications and accompanying enclosures from your office:

1. Your letter of July 8 re Application No. A-1765, Permit No. A-1093, for municipal use of 150,000 gallons per day of the waters of Roaring Springs; Receipt No. 3344 covering $5.00 recording fee; forms on which to file notice as to the beginning of construction work, etc. etc.

2. Your letter of July 8 re Application No. A-1764, Permit No. A-1092 covering the use of twelve second feet from Bright Angel Creek for power purposes; Receipt No. 3343 for the $45.00 recording fee; forms on which to file notice of complete application of water to a beneficial use.

3. Your letter of July 9 re Application No. A-1766, Permit No. A-1094 covering the appropriation of water from Bright Angel Creek for domestic use, irrigation and stock watering at Phantom Ranch; Receipt No. 3345 in the amount of $12.16 for recording fee; forms on which to file notice of complete application of water to a beneficial use.

4. Your letter of July 8 re Application No. A-1735, Permit No. A-1091 covering the appropriation of 300,000 gallons per day from certain springs and Garden Creek at Indian Gardens in connection with the South Rim municipal water supply; Receipt No. 3342 for your necessary $5.00 recording fee; form on which to file affidavit making Proof of Appropriation of Water. It is noted that an additional $3.50 fee will be required at the time of filing this proof.

Before filing the additional notices and proofs in connection with the four permits above specified, it will be necessary for me to secure further information on certain points. This I am arranging to do, and I will file the additional papers required at the earliest possible date, probably by a personal call at your office.

I appreciate greatly your personal attention and helpfulness in connection with these filings.

Very Sincerely Yours,

M. R. Tillotson,
Superintendent.

MRT/he.
CC: Mr. Taylor.

07-09-1937: letter to superintendent from state of arizona regarding application no. a-1766, permit no. a-1094

OFFICE OF
STATE WATER COMMISSIONER
ROOM 407 ARIZONA STATE BUILDING
PHOENIX, ARIZONA

EDWIN T. STEWART
COMMISSIONER

660-05

July
9
1937



Mr. M. R. Tillotson,
Superintendent,
Grand Canyon National Park,
Grand Canyon, Arizona.

Re: App. No. A-1766,
Per. No. A-1094,
Bright Angel Creek.

Dear Mr. Tillotson:

Enclosed herewith is the above designated permit, granted on the 29th day of June, 1937, to M..R. Tillotson as Superintendent of Grand Canyon National Park, acting for and on behalf of the UNITED STATES OF AMERICA, together with our Receipt No. 3345 for $12.16 recording fee.

The enclosed form for notice of complete application of water to beneficial use is to be filed in this office according to the date set forth in the permit on the FOURTH page of the instrument.

Very truly yours,
Edwin T. Stewart
EDWIN T. STEWART
STATE WATER COMMISSIONER.

ETS:L
Encs.4.

Application No. A-1766 Permit No. A-1094

P E R M I T

STATE OF ARIZONA,)
) ss.
COUNTY OF MARICOPA.)

This is to certify that I have examined the foregoing application and do hereby approve the same, and grant to the applicant a permit to appropriate the water described therein subject to the following limitations and conditions:

The amount of water appropriated shall be limited to the amount which can be applied to beneficial use and shall not exceed Twenty Five Thousand (25,000) gallons per day for Domestic Use, Five (5) acre feet per acre per annum for Irrigation, and Two Thousand (2,000) gallons per day for Stock Watering purposes.

The priority of date under this permit is May 15, 1937.

Actual construction work

Complete application of water to the proposed use shall be made on or before June 28, 1942.

WITNESS my hand and seal of office this 29th day of June, 1937.

(SEAL) (Signed) Edwin T. Stewart
State Water Commissioner.

APPLICATION NO. A-1766
PERMIT NO. A-1094
P E R M I T
To Appropriate Public Waters
of the State of Arizona
District No._____
This instrument was first received in the office of the State Water Commissioner at Phoenix, Arizona, on the 15th day of May, 1937, at 9:00 o'clock A.M.
Returned to applicant for correction_____
Corrected application refiled
Approved June 29, 1937.
Recorded in Book No. 10 of Applications for Permit at page 1766.
(Signed) Edwin T. Stewart
State Water Commissioner.
(SEAL)

07-08-1941: letter to grca from nps regarding application no. a-1766, permit no. a-1094

7/15

July 8, 1941

Mr. Frank A. Kitteredge, Superintendent
Grand Canyon National Park
Grand Canyon, Arizona

Re: App. No. A-1766, Per. No. A-1094
Bright Angel Creek
Grand Canyon National Park

Dear Mr. Kitteredge:

We have examined the rider enclosed with your letter of June 13th which you submit for the purpose of amending Permit No. A-1094, granted pursuant to Application No. A-1766.

After comparing the proposed changes with our record we are of the opinion that there should be a complete new application prepared and filed as an amended application. We find it will be difficult, if not impossible, to show the changes on our record, and before such changes are made, if it were possible to make them, the original permit should be changed and submitted to us. In other words, the permit and our record must agree.

Except for the changes you desire to make the amended application will be identical with the original. There appears to be some crowding of typewritten matter in the blank spaces of the form which probably can be improved in the preparation of the amended application. For instance, we think that paragraph 3 can be rearranged, but if it cannot be shortened, reference can be made in this paragraph to the rider and the points of diversion described there as has been done with the description of diversion works in paragraph 5.

We believe it desirable that some reference be made in the amended application to the abandoned point of diversion and the reason for abandoning it and that the other reasons for filing the amended application be stated. A statement in about the following form can be made on the rider:

This amended application is made and filed by the applicant primarily for the purpose of abandoning the point of diversion designated as A in the original application and acquiring the right to divert water from Bright Angel Creek at diversion point D., and for the purpose of increasing the quantity of water appropriated and securing an extension of time in which to complete construction work and to make complete application of the water to beneficial use. (Also refer to any other changes you may make.)

We note your statement that you will eventually require more water from the source of supply covered by this Permit. In this connection would it not be advisable while you are amending the application to increase the amount of the appropriation to your anticipated requirements in the next five or ten years? The Commissioner will allow five years from the date of granting the amended permit in which to make complete application of water, and has the authority to extend this time beyond the five year period. This is about as close as we can approach municipal use in a case of this kind as we do not believe the use is the same as that of a municipality.

In event you do not desire to increase the quantity of water in the amended application and prefer to make proof of appropriation at an early date, and secure a Certificate of Water Right under the present permit, then make a new filing for additional water, we have no objections to this procedure. The map submitted will serve for the new application if there are no changes in points of diversion and places of use.

You will observe that the blank forms we enclose differ somewhat from the form used to prepare the original application in this case. Paragraph 4 now describes the place of using water instead of describing the conduit system.

We enclose a partially completed rough draft of the amended application indicating a few proposed changes we think desirable.

Sincerely yours,

Edwin T. Stewart
Engineer

ETS:LC
Encs.

00-00-0000: application for a permit: to appropriate public waters of the state of arizona: permit no. a-1094, application no. a-1766

RECOMPARED

RECORDED
COMPARED

Permit No. A-1094 Application No. A-1766

See Amended Permit A-1094

Sent to Supt. Tillotson with letter 3/5/37

APPLICATION FOR A PERMIT

To Appropriate Public Waters of the State of Arizona

Filed May 15, 1937, at 9:00 A. M.
(Applicant must not fill in the above blanks.)

I, M. R. Tillotson as Superintendent of Grand Canyon National Park, acting for and on behalf of the United States of America, (Name of Applicant.)
of Grand Canyon, County of Coconino,
(Postoffice.)
State of Arizona, do hereby make application for a permit to appropriate the following described unappropriated waters of the State of Arizona:

1. The source of the proposed appropriation is Bright Angel Creek
(Name of stream or name of reservoir and stream if water is diverted from reservoir.)
, tributary of Colorado River

2. The amount of water which the applicant intends to apply to beneficial use is:

For Domestic (Municipal or Domestic.) use, 25,000 gallons per day.

For Irrigation (Irrigation.) use, 5 AF/A/annum (Cubic feet per second, or acre feet per acre per annum.)

For Stock Watering (Mining or Stock Watering.) use, 2000 g.p.d. (Cubic feet per second, or gallons per day.)

For (Power.) use, cubic feet per second.

For use,

3. The point of diversion is located as follows: from SW corner Section 18, T31N., R3E., G & SR B&M (State bearing and distance or coordinate distances to section or quarter section corner.)
A - Fred Harvey Line - West Side Bright Angel Creek, 17,457 ft. North, 8116 ft. East of said corner, being in NW¼ of said Sec. 18 as projected. The said section is theoretically projected from the SW corner Sec. 19, T31N., R3E., G&SR B&M.
B - RPG Line - midchannel Bright Angel Creek, 15,424 ft. North & 7848 ft. East of said corner, being in NW¼ of said Sec. 32 as projected.
C - West Irrigation Ditch - East Side Bright Angel Creek, 15,296 ft. North & 7801 ft. East of said corner, being in NW¼ of said Sec. 32 as projected.
being within the unsurveyed land North of the Colorado River (State 40-acre subdivision of U. S. Government survey or projection thereof.) of Sec. 32, T. 32 N. (No. N. or S.),
R. 3 E as above projected, G. & S. R. B. & M., in the County of Coconino
(No. E. or W.)

4. The See Rider (Main ditch, canal or pipe line.) to be miles in length, terminating in the
of Sec., T., R., G. & S. R. B. & M.,
(State 40-acre subdivision of U. S. Government survey or projection thereof.) (No. N. or S.) (No. E. or W.)
the proposed location being shown throughout on the accompanying map.

DESCRIPTION OF WORKS

5. **Diversion Works:** (a) Diversion ~~will be~~ is by gravity, ~~the diverting dam to be~~ see Rider ~~feet in~~ height (stream bed to overflow), long on top, and constructed of (Concrete, earth, brush, etc.)

(b) Description of headgate See Rider (Timber, concrete, etc., number and size of openings.)

(c) If water is to be pumped give general description See Rider (Size and type of pump.)

(Size and type of engine or motor to be used, total head water is to be lifted, etc.)

Do not use this form in making application for a permit to construct a reservoir and store water. A special form for this purpose may be obtained from the State Water Commissioner.

(This is a true copy of the official application and permit in files of Supt, Grand Canyon N.P. - 1/26/39 - S.H.)

See Rider

6. **Conduit System.** (a) Canal, ditch, flume: Width on top (at water line) ..... feet; width at bottom ..... feet; depth of water..... feet; length ..... feet; grade ..... feet per 1,000 feet; materials of construction .....
(Cross out two not used.)

(b) Pipe line: Diameter ..... inches; length ..... feet; grade ..... feet per 1,000 feet; total fall from intake to outlet ..... feet; kind .....
(Riveted steel, cement, wood-stave, etc.)

NOTE.—If a combination of different sizes or kinds of conduit is to be used, attach extra sheets with complete description, also show location of each clearly on map.

See Rider

7. **Distributing Works.** Tank or Trough: Material ..... Size.....
(Cross out one.)

Capacity .....

8. **Cost and Construction Schedule.** The estimated cost of the ~~proposed~~ project is ~~$~~ was 10,000

It is ~~proposed to begin construction within~~ Above construction was started in/ 1924 and is complete as described ~~application, to complete construction within~~ ..... We now thereafter and to completely apply the water to the ~~proposed~~ use in quantities of approximately 95% of that requested. We anticipate the full capacity to be reached in approximately five years. after the beginning of construction.
(Not over 1 year.)

DESCRIPTION OF PROPOSED USE

9. **Domestic Use.** Domestic use is proposed as follows: To supply 13 permanent residents, and 100 to 300 part time residents; and to provide domestic and fire protection needs for all, in the E½ NW¼, and NE¼ SW¼ of Sec. 5, T31N, R3E, G & SR, B&M, as projected in unsurveyed land from the SW corner of Sec.18 of same township and range.
not exceeding one-half acre, stating number of persons and number of domestic stock to be served.)

10. **Municipal Use.** To supply the city of ..... County, having a present population of ....., and an estimated population of ..... in 19.....
(Name of.)

11. **Irrigation Use.** (a) The land to be irrigated has an area of 17.7 acres; is located in Coconino County, Arizona, and is particularly described by legal subdivisions as follows:

(Describe the subdivisions of the township or section the entire area of which it is proposed to irrigate, by the largest possible legal subdivisions, in the table below, inserting the area in the acreage column. In cases of irregular shaped parcels use a separate line to describe each 2½ acre subdivision in which they occur and insert only the area of such subdivision to be irrigated in the acreage column.)

Tp.	Range	Sec.	SUBDIVISIONS	Number Acres To Be Irrigated
			Approximate Subdivision in Unsurveyed Land:	
T32N	R3E	32	SE¼ of SW¼	0.20 acres
T31N	R3E	5	NE¼ of NW¼	6.86 acres
T31N	R3E	5	SE¼ of NW¼	5.52 acres
T31N	R3E	5	NE¼ of SW¼	5.12 acres
				17.70 acres

(If more space is required, attach separate sheet.)

(b) What is the character of the soil? Sand and boulders with small amount of loam.

(c) What quantity of water is necessary to raise proposed crops? At least 5. AF/A/annum
(Acre feet per acre per annum.)

(d) Land to be irrigated is owned by United States of America (National Park Service)
(Name of owner.) (If applicant is lessee, etc., so state.)

(e) The irrigation season will begin about April and end about October
(Beginning date each season.) (Closing date each season.)

(f) Has the land to be irrigated any water right or source of water supply other than that herein applied for? No Describe the nature and amount of any additional supply. --

12. **Stock Watering Use.** (a) What kind of stock is it proposed to serve? Horses and mules

(b) What is the average number of stock it is proposed to serve per annum? 75 per day

(c) What is the maximum number of stock it is proposed to serve? 100 per day

Stock is kept approximately equally in two corrals located in the SW¼ of NE¼ of NW¼ of Sec. 5; and in NE¼ of NE¼ of SW¼ of Sec. 5, both being in the projected portion of T31N, R3E, G & SR B&M in unsurveyed land.

Rider

#4. A. The Fred Harvey pipe line is 0.47 miles in length, terminating in 40,000 gallon distribution reservoir on east side of Bright Angel Creek, 15,596 ft. North and 7539 ft. East of SW corner section 18, T 31 N, R 3 E, G & SR B&M, in unsurveyed land and in the NE¼ NW¼ Sec. 5, T 31 N, R 3 E, as projected from above SW corner Sec. 18 of same Township and Range.

B. The NPS pipe line is 0.54 miles in length, terminating in two 5,000 gallon distribution tanks on west side of Bright Angel Creek, 14,143 ft. North and 6665 ft. East of said SW corner section 18, in unsurveyed land and in SE¼ NW¼ Sec. 5 as above projected.

C. The West Irrigation Ditch is 0.72 miles in length and terminates approximately 1100 feet above the mouth, on the west side of Bright Angel Creek, in unsurveyed land in NE¼ SW¼ of said Sec. 5 as above projected.

D. An East Irrigation Ditch is 0.31 miles in length, originates at the overflow of the 40,000 gallon reservoir and terminates approximately East of the two 5000 gallon tanks, on the East side of Bright Angel Creek, in unsurveyed land in SE¼ NW¼ of said Sec. 5 as above projected.

All of the above are in unsurveyed land. For details and creek crossings, see accompanying map.

#5a. Diversion is by gravity as follows:

A. The Fred Harvey Diversion consists of small catch basin lined with hand placed rock, from which the water enters a 6" GI pipe 160 ft. in length, and thence the 2" GI main.

B. The NPS Diversion consists of 180 feet of 4" GI pipe, placed in the bed of Bright Angel Creek, and from which the water enters the 2" GI main.

C. The Diversion for the West Irrigation Ditch is from small riprapped catch basin, head wall and low masonry side wall 30 feet long.

D. The East Irrigation Ditch Diversion consists of simple wooden check and turn-out to throw water from overflow channel into irrigation ditch, said diversion being merely an additional use of diversion under Item A.

#5b. There are no gates on the pipe lines. The West Ditch diversion includes a standard irrigation sluice gate. The East Ditch has simple wooden check and turn-out, built in place.

#5c. There are no pumps.

#6a. The first 600 feet of the West Ditch have a top width of 5 feet ±, bottom width of 2 feet; depth 18 inches ±. The grade is variable. The remainder of ditch has top width of 3.5 feet ±; bottom width 18"; depth 1 ft. The length is 3200 ft; grade variable with minimum of 4 ft. per 1000. The East Ditch has top width of 3.5 ft. ±; bottom width 18 inches; depth 1 ft.; length 1650 ft.; grade variable with minimum of 19.3 ft. per 1000.

Laterals permit interchange of water between the two main ditches.

#6b. Except as described under #5, the pipe: Diameter 2"; length (Fred Harvey) 2450 feet, (NPS) 2825 ft.; Grade (Fred Harvey) 15.7 feet per 1000, (NPS) 14.8 ft. per 1000; total fall (Fred Harvey) 39.5 feet, (NPS) 42 ft. ±; kind galvanized iron.

#7. Fred Harvey line distributes from 40,000 gallon concrete reservoir through G. I. pipes varying from 3/4" to 2" in diameter.

NPS line distributes from 2 - 5000 gallon redwood tanks through similar pipe.

Irrigation is through laterals similar to smaller main ditches.

13. Power Use. (a) The maximum amount of water to be used through the penstock is ..... cubic feet per second.

(b) Total amount of power to be developed ..... theoretical horsepower.
(Second feet × fall ÷ 8.8.)

(c) Total fall to be utilized ..... feet.
(Pressure head.)

(d) The nature of the works by means of which the power is to be developed .....
(Turbine, Pelton wheel, hydraulic ram, etc.)

(e) The works to be located, and the water to be released, in ..... of Sec....., T. ....., R. ....., G. & S. R. B. & M.
(40-acre subdivision.) (No. N. or S.) (No. E. or W.)

(f) Is water to be returned to any stream? ..... If so, name stream and describe location of point where returned ..... in the ....., Sec....., T....., R. ....., G. & S. R. B. & M.
(Yes or No.) (Name of stream.) (40-acre subdivision.) (No. N. or S.) (No. E. or W.)

(g) The use to which the power is to be applied is .....
(For distribution and sale or private use, etc.)

14. Mining Use. The mines to be served are ..... known as the .....
(Placer gold, lode gold, copper, etc.) (Names of claims or name of group.)

located in ....., Sec....., T....., R. ....., G. & S. R. B. & M., and owned by .....
(40-acre subdivision.) (No. N. or S.) (No. E. or W.)

The method of utilizing the water is .....

Will the water be polluted by chemicals or otherwise? .....
(Explain nature of pollution, if any.)

What disposition is made of water after use? .....
(State if stored for reuse. If returned to a stream give name of stream and description of 40-acre tract to which returned.)

GENERAL

15. Are the maps required by the Rules and Regulations filed with Application? **No** (Yes or No.) If not, state specifically the time required for filing same **30 days**

16. The proposed point of diversion is on land of **Grand Canyon National Park.**
(Insert name of owner, or state on Public Domain, National Forest, State Land, etc.)

17. The proposed conduit system is on land of **Grand Canyon National Park.**
(Insert name of owner, or state on Public Domain, National Forest, State Land, etc.)

18. The land at the proposed place of use is owned by **Grand Canyon National Park.**

19. Post office used by those living near the proposed point of diversion is **Grand Canyon, Arizona.**

20. Of the applicant's knowledge, has the water described herein ever been appropriated, claimed or used by others? **Yes** If so, file a statement herewith furnishing names of former appropriators or users of the water, and supporting applicant's claim that the water is now subject to appropriation. **Fred Harvey, as lessee, or operator under the National Park Service, is joint user during the term of his lease. The former Fred Harvey use is not noted on present use.**

21. If the source of supply is a stream, state names and addresses of water users from the stream below the proposed point of diversion; or, if the source of supply is other than a stream, furnish the names and addresses of at least three residents of the vicinity familiar with the source of supply and the proposed use of water.

There are no other uses below the point of diversion.

(Sgd) M. R. Tillotson.
Signature of Applicant.

ORDER OF CORRECTION

STATE OF ARIZONA, County of Maricopa. } ss.

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for correction or completion, as follows:

In order to retain its priority, this application must be corrected, completed and refiled in the office of the State Water Commissioner on or before ....., 19.....

WITNESS my hand and seal of office this ..... day of ....., 19.....

State Water Commissioner.

Application No. A-1766 Permit No. A-1094

PERMIT

RECORDED
COMPARED

STATE OF ARIZONA, County of Maricopa. } ss.

This is to certify that I have examined the foregoing application and do hereby approve the same, and grant to the applicant a permit to appropriate the water described therein subject to the following limitations and conditions:

The amount of water appropriated shall be limited to the amount which can be applied to beneficial use and shall not exceed Twenty Five Thousand (25,000) gallons per day for Domestic Use, Five (5) acre feet per annum for Irrigation, and Two Thousand (2,000) gallons per day for Stock Watering purposes.

The priority of date under this permit is May 15, 1937.

Actual construction work shall begin on or before ....., and shall be prosecuted with reasonable diligence and be completed on or before (Completed)

Complete application of the water to the proposed use shall be made on or before June 28, 1942.

WITNESS my hand and seal of office this 29th day of June, 19 37.

(Signed) Edwin T. Stewart.
State Water Commissioner.

(SEAL)

Application No. A-1766
Permit No. A-1094

PERMIT
To Appropriate Public Waters of the State of Arizona

District No. .....

This instrument was first received in the office of the State Water Commissioner at Phoenix, Arizona, on the 15th day of May, 19 37, at 9:00 o'clock A. M.

Returned to applicant for correction

Corrected application refiled

Approved June 29, 1937.

Recorded in Book No. 10 of Applications for Permit at page 1766.

(Signed) Edwin T. Stewart.
State Water Commissioner.

(SEAL)

THE MANUFACTURING STATIONERS INC. PHOENIX, ARIZONA

03-29-1937: letter to state of arizona from nps regarding objection to offer to application to appropriate waters from bright angel cr

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZ.

REC'D MAR 31 1937

March 29, 1937

Hon. Edwin T. Stewart,
State Water Commissioner,
407 Arizona State Building,
Phoenix, Arizona.

Dear Mr. Stewart:

Following my conversation with you on February 24, in regard to the general matter of water filings, I took up with Mr. Taylor, our attorney, the objection you had to offer to our application to appropriate waters from Bright Angel Creek, returning to him the application and map for necessary corrections.

I am now in receipt of a copy of Mr. Taylor's letter of March 25, to you, enclosing the corrected map. There is, therefore, enclosed the corrected application form which should be attached to the map submitted direct by Mr. Taylor.

There is also enclosed voucher in the amount of $5.00 to cover this filing fee. If you will sign this in the place indicated and return it to me upon acceptance of the enclosed filing, the voucher will be put in course of payment.

Sincerely yours,

M. R. Tillotson,
Superintendent.

MRT/etj
CC for The Director,
Mr. Taylor.

03-25-1937: letter to state of arizona from attorney regarding tracing and one blue-print of drawing no. gc-5120



March 25, 1937.

Hon. Edwin T. Stewart,
State Water Commissioner,
407 Arizona State Building,
Phoenix, Arizona.

Dear Mr. Stewart:

We are returning herewith tracing and one blue-print of drawing No. GC-5120, being the Bright Angel Creek diversions for Phantom Ranch. This tracing has been corrected, in accordance with your suggestions, to show the theoretical section lines and the area under irrigation in each 40-acre subdivision, and designates the three points of diversion, A, B, and C, in accordance with the revised application.

The application form which this is to accompany was forwarded to Superintendent Tillotson on March 5 for his signature in its amended form, and should have reached you by this time.

We assume that the application has received an application number by this time, and should like to obtain this number for our own records.

Yours very truly,

JET

Joseph E. Taylor,
Attorney.

Encls.

AvWD:SH

CC: Director
Supt. Tillotson

Dear Mr. Tillotson:

We have sent the tracing and blue-print direct to the State Engineer, to be sure of staying within the 30-day limit requested when writing the application. This was possible, as Mr. Carrel had already signed the tracing. We are sending you herewith two prints of the revised map, and are also sending one to the Director for his files.

Yours very truly,

Encls.

These in Carbs Files.

02-25-1937: letter to nps from state of arizona regarding receipt of letter inquiring about joining you power and domestic or munici

OFFICE OF
State Water Commissioner
ROOM 407 ARIZONA STATE BUILDING
PHOENIX, ARIZONA

EDWIN T. STEWART
COMMISSIONER

February 25, 1937.

REC'D [illegible] 1937

ohh---!

Bright Angel

Mr. Joseph E. Taylor,
Attorney at Law,
National Park Service,
110 Sutter Street,
San Francsico, California.

Dear Mr. Johnson:

This will acknowledge receipt of your letter of the 18th instant inquiring about joining your power and domestic or municipal uses in one application.

Anticipating that Mr. Tillotson would be in the office yesterday, answering your letter has been delayed until I could see him. After talking with him about your proposed applications I now have a more complete understanding of your constructed project and the project it is proposed to construct, and it is my advise that a separate application be made for power in each instance.

Very truly yours,

EDWIN T. STEWART
STATE WATER COMMISSIONER.

ETS:C

02-13-1937: letter to state of arizona from superintendent regarding filing made on waters of the bright angel creek

February 13, 1937.

FILE COPY

Mr. Marvin T. Stewart,
State Water Commissioner,
Phoenix, Arizona.

Dear Mr. Stewart:

Recently I wrote you in connection with the filing I made on waters of the Bright Angel Creek, advising that I would be in Phoenix February 16 at which time I would call at your office to discuss this matter in person, if necessary.

The contract letting, in connection with which I planned to make the Phoenix trip, has now been bpos-poned until February 25 on or about which date I will call at your office.

Sincerely yours,

M.R.Tillotson,
Superintendent.

MRT/rd

February 5, 1937.

FILE COPY

X 620-05 614

Mr. Edwin T. Stewart,
State Water Commissioner,
407 Arizona State Building,
Phoenix, Arizona.

Dear Mr. Stewart:

I am enclosing herewith, in duplicate, application for a permit to appropriate water from Bright Angel Creek in Grand Canyon National Park for domestic use, irrigation, and stock watering. This application is covered by the original tracing and one blue print of our drawing GC 5120 showing details of the diversion systems, and bearing a certificate signed by Mr. C.L.Carrel, Park Engineer. There is also enclosed a voucher, in the amount of $3.00, which, when signed and returned will be put in immediate course of payment.

I am not quite sure whether there is required an original tracing of the supporting map or merely a blue print thereof, however, both are enclosed and, if it is not necessary for you to retain the tracing after the proper notations and records have been made, it may be returned for our files. Neither am I sure whether filings of this nature are to be made by a single copy or in duplicate. Two copies of the executed forms are, nevertheless, enclosed and no copy has been retained for my files. If the duplicate is not necessary, this may be returned.

I expect to be in Phoenix on February 16 at which time I will call at your office in regard to this filing. If any further information is required, or if the filing is not complete in every detail, I suggest that all papers be held until the sixteenth when I can have an opportunity to discuss this matter with you in person.

Sincerely yours,

M. R. Tillotson,
Superintendent.

MRT/crd
cc Mr. James V. van Dunn

Supporting Hydro Data

02-15-1952: memorandum to regional director from superintendent regarding additional water supply

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

GRAND CANYON NATIONAL PARK
Grand Canyon, Arizona

February 15, 1952

Memorandum

To: Regional Director, Region Three

From: Superintendent

Subject: Additional Water Supply, South Rim, Grand Canyon National Park

In reply to Mr. Kittredge's inquiry in his memorandum of January 28, we have the following information:

The only measurements at Roaring Springs were those taken February 9, 1927 by Utah Parks Company Engineers, at two points:

1. Bright Angel Creek, 200 feet above its junction with Roaring Springs Creek, which showed a flow of 9.30 second feet.

2. Roaring Springs Creek below Roaring Springs, which showed a flow of 7.69 second feet. (Total flow 16.99 second feet.)

Both Roaring Springs and Bright Angel Creek above the junction of the two streams have a considerable seasonal and yearly fluctuation; last year (1951) being the lowest since the Utah Parks pumping station was installed, according to Utah Parks engineers.

Indian Gardens

There are three pumps at Indian Gardens with the following capacities:

a. 75 gals. per minute
b. 160 gals. per minute
c. 160 gals. per minute

Normally only one of the larger pumps is used at a time; occasionally, however, a large one and the small one are used together; and it is possible to use all three at once.

Stream flows at Indian Gardens:

Minimum - - - - - 150 gals. per minute
Normal - - - - - 200 gals. per minute

It was the opinion of Santa Fe engineers that only rarely would the springs show as much fluctuation as indicated above. The flow is remarkably steady at 200 gallons per minute, year by year and at all seasons of the year. Last summer, during July and August, Santa Fe pumping records averaged 8,000,000 gallons per month, and they were taking the entire output of the springs.

(SIGNED)

H. C. Bryant
Superintendent

In triplicate

C
O
P
Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES - SURFACE WATER

October 17, 1952

Superintendent
Grand Canyon National Park
Grand Canyon, Arizona

Dear Sir:

Subject: Roaring Springs

The following lists the miscellaneous discharge measurements made in the Roaring Springs Creek area during the summer months of 1952:

Date 1952	Roaring Springs Cr. at mouth	Bright Angel Creek above Roaring Springs	Bright Angel Creek at mouth
June 21	13.0	19.4	39
July 31	9.6	11.3	28
Aug. 30	8.4	10.7	23
Oct. 10	7.3	8.83	*21

Note.- September measurement postponed because of Sept. 20-21 flood runoff in area.

*Estimated on basis of measurements made Oct. 7 and 14; 22.8 cfs and 20.4 cfs respectively.

This completes investigations which we propose to make this year. However, it is anticipated that we will again measure Roaring Springs about June 1953 under our general program of such spring inflow to the Colorado River in the Grand Canyon area.

Very truly yours

(SIGNED) John H. Gardiner

JOHN H. GARDINER
District Engineer

cc. Mr. Hely

Copy to: Reg Dir Region Three 2 ✓

Other Supporting Information

United States Department of the Interior
NATIONAL PARK SERVICE
WESTERN REGION
450 GOLDEN GATE AVENUE, BOX 36063
SAN FRANCISCO, CALIFORNIA 94102

IN REPLY REFER TO:

L54(WR)PSW November 14, 1974
CHIR/WR Docket File #1
GRCA NM/WR Docket File #2
GRCA NP/WR Docket Files #3, 4, 5, 7 and 8
TONTO/WR Docket Files #1&2

Memorandum

To: Superintendent, Chiricahua
Superintendent, Grand Canyon
Superintendent, Tonto

From: ACTING Regional Director, Western Region

Subject: Water Right Docket Material

Enclosed for your docket files and information are State of Arizona orders of cancellation for various applications for diversion of water sources in Chiricahua National Monument, Grand Canyon National Monument, Grand Canyon National Park and Tonto National Monument. As you recall, we had been given an extension of time as a result of our letter of September 14, 1973, to the State Land Department of Arizona in which we discussed the status of our water use and the comity nature of our filings. This extension of time has lapsed and the State has administratively cancelled the applications, copies enclosed. These applications, however, have not been active and would not qualify for license according to Arizona State Law, in any case. All of these diversions are within the Park and are protected under the Reservation Doctrine when they are used.

Since we are essentially only appropriating water on a regular basis from Roaring Springs, any action taken on our part to acquire a State License on Roaring Springs might be construed by the State as an implied waiver (or abandonment) of our rights on the other points of diversion. The best course of action in this case is to allow the State to administer this unilateral action while we maintain our position of comity.

John H Davis

Enclosures

cc:
WASO, Water Resources, w/encls - Mr. Berte
Field Solicitor, San Francisco Office, w/o encls
General Superintendent, SOAR

CONSERVE AMERICA'S ENERGY

Save Energy and You Serve America!

06-27-1973: memorandum to field solicitor from superintendent regarding water rights application no. a-2511

AS

JUL 27 1973



L54

Memorandum

To: Field Solicitor, Phoenix Office

From: Superintendent, Grand Canyon

Subject: Water Rights Application No. A-2511, Grand Canyon National Park

Enclosed is a copy of the application for water rights along Bright Angel Creek, which was filed by Grand Canyon National Park September 23, 1941. Also enclosed are copies of the Show Cause Order and a recent memorandum from this office to our Regional Office in San Francisco.

If it is still necessary for us to pursue the Water Rights Application, we do not feel a revision of the document is necessary. We would request that the State continue to hold Application No. A-2511 without action at this time.

(SGD) Merle E. Stitt

Enclosures (3)

cc:
Director, Western Region
Division of Water Rights, Western Region

07-30-1973: stamp of receipt

Received
Division of Water Resources
JUL 30 1973

Name	Act	Info	File	Init.

07-26-1973: memorandum to superintendent from acting regional director regarding water rights along bright angel creek

Witucki
Wallis
~~Actg Asso. Dir.~~?, PS
Mihan (has seen)
~~Actg~~ Reg. Dir.

L54 (WR) ASW
GRCA/GEN
GRCA/WATER RIGHTS GEN FILE

July 26, 1973

Memorandum

To: Superintendent, Grand Canyon NP

From: Acting Regional Director, Western Region

Subject: Water Rights along Bright Angel Creek

This is in response to your memorandum of July 20, above subject. As discussed with your staff, we in turn, have reviewed the pertinent information with Field Solicitor Ralph Mihan here and Ed Clohessy of the Field Solicitor's Office, Phoenix. It has been concluded that the best course of action was the submittal of the enclosed letter.

(Sgd.) John E. Cook

John E. Cook

Enclosure

(WR)ASW):GSWitucki:mpm 7/26/73

00-00-0000: memorandum to director from superintendent regarding water rights along bright angel creek

United States Department of the Interior

NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZONA 86023

IN REPLY REFER TO:
L54

Memorandum

To: Director, Western Region

From: Superintendent, Grand Canyon

Subject: Water rights along Bright Angel Creek

The original of the enclosed show cause order concerning Application No. A-2511 to appropriate water was received by the park recently and we have discussed this with staff members in your office.

We now request your advice and counsel on what action we should take on the show cause order if any action is needed at all.

07-20-1973: memorandum to director from superintendent regarding water rights along bright angel creek

ASW

United States Department of the Interior

NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZONA 86023

IN REPLY REFER TO:
L54

JUL 20 1973

RECEIVED
NPS Western Regional Office
JUL 25 '73
Director
Assoc. Dir. Mgt.
Operations
Coop. Prog. Spt.
Fin. & Mgt. Cont.
Assoc. Dir. (Prof.)
Reg. Scientist
E. P. & D.
Operations Eval.
Prog. & Budget
Org. & Manpower
Action taken:

Memorandum

To: Director, Western Region

From: Superintendent, Grand Canyon

Subject: Water rights along Bright Angel Creek

The original of the enclosed show cause order concerning Application No. A-2511 to appropriate water was received by the park recently and we have discussed this with staff members in your office.

We now request your advice and counsel on what action we should take on the show cause order if any action is needed at all.

Enclosure

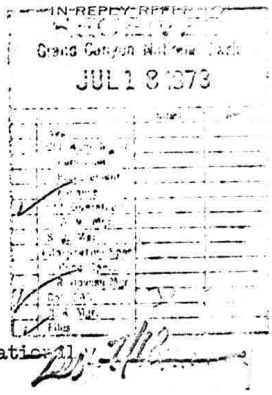
07-25-1973: stamp of receipt

Received
Division of Water Resources
JUL 25 1973

Name	Act	Info	File	Init

07-17-1973: memorandum to superintendent from field solicitor regarding water rights application no. a-2511

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
[illegible]
[illegible]
Phoenix, Arizona



July 17, 1973

Memorandum

To: Superintendent, Grand Canyon National Park, National Park Service

From: Field Solicitor

Subject: Water Rights Application No. A-2511, Grand Canyon National Park

The Field Solicitor at San Francisco has referred to this office an Order to Show Cause served upon you in connection with the subject application. The notice required a response on or before August 3, 1973. It is suggested that you furnish this office with a copy of the application and that the application be reviewed by you at this time to determine whether any revisions are needed or desired. It has been our experience recently that the State will accept revisions of the original application in responding to the Show Cause Order. We will offer suggestions to you with regard to your response to the Order after a review of the application.

William G. Lavell
Field Solicitor

602 - 261 - 3601

Edmund J. Clohessy
Edmund J. Clohessy
For the Field Solicitor

cc: Assistant Regional Director, National Park Service, Phoenix

In reply refer to:
L54 GRCA-L

September 23, 1952

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Branch

Subject: Extension of Time, Water Right Application A-1766, Grand Canyon National Park Docket No. 4

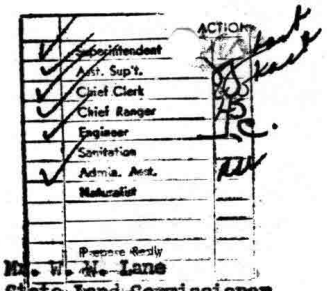
Attached are the original and one copy of an order of September 16 by the Deputy State Land Commissioner, granting an extension of time until August 22, 1956, in which to make proof under the subject water right. We have already distributed copies of my letter of August 22 requesting such extension. We are filing both instruments in our assembly of the subject docket, and suggest that the same procedure be followed in your office and at the Park. The original order should be filed in the Park.

(SGD.) A. VAN V. DUNN.
A. van V. Dunn
Chief, Water Resources Branch

In duplicate

Attachments 2







Region three

In reply refer to:
L54 GRCA-L

August 22, 1952

Mr. W. H. Lane
State Land Commissioner
Phoenix, Arizona

Dear Mr. Lane:

On August 8, 1945, we reported the completion of the water system at Grand Canyon National Park covered by Application No. A-1766, Permit A-1094. By letter of August 17, 1948, I requested an extension of time in which to permit the water use to reach an apparent maximum within the limits of quantity specified in the application and permit. By order of September 8, 1948, you granted an extension of time in which both to complete the water system, and to make full beneficial use of the water.

By letter of July 10, 1950, I advised that the water development plan would have to be altered, and requested another extension of time in which to modify the water system and make full beneficial use of the water. The extension of time was granted in the order of the Deputy State Land Commissioner on July 22, 1950. Construction is supposed to be completed by August 22, 1952, and beneficial use is to be fully made by the same date next year.

There has been a complete water system since the fact was reported in 1945, and water is being used. Some modifications have been made from time to time, to permit increasing water use as needed by the growing number of Park visitors. However, the authorized quantity of water is not yet used, but the quantity is increasing. There was a suggestion of stabilization when 1949 attendance was less than that of 1948, but there has been a marked increase in 1950 and 1951, as shown by the following records of total Park attendance for the travel years ending September 30 of each year:

1948	618,210	visitors
1949	605,331	"
1950	654,348	"
1951	688,673	"

As a result of these trends, it is impossible to predict what the ultimate water system needs at Phantom Ranch, or any other developed area of the Park will be. It would also be unwise to limit water rights to less than authorized quantities by considering any final proof at this time.

Accordingly, request is hereby made for a further extension of time in which to determine ultimate needs, and make full use of the water.

Sincerely yours,

(SGD.) A. VAN V. DUNN.

A. van V. Dunn
Chief, Water Resources Branch

Copy to: Regional Director, Region Three (2)
Supt GRAND CANYON

Refer to:
L54 GRAN-L

August 20, 1952

VIA AIR MAIL

Memorandum

To: Regional Director, Region Three

From: Superintendent, Grand Canyon NP

Subject: Proof under Water Right Application A-1766, Permit A-1094, Bright Angel Creek Diversions for Phantom Ranch, GCNP

In connection with full beneficial use report due August 22, the following information is available:

The maximum number of persons, including employees, using the Phantom Ranch area in any way during the past five-year period has at no time exceeded forty persons daily.

A maximum of 35 mules occupied the corrals for one-day periods on several occasions, but that number never was exceeded. All shade trees, decorative shrubs, and fruit orchards now in growth within the 17.7 acres composing the Phantom Ranch property were possible only by irrigation; and their continued growth is, of course, dependent upon continuous irrigation.

From the above, it is evident that no such extensive use of the area, as originally planned, has been made, for the following reasons:

The authorized systems proposed for use of waters diverted from Bright Angel Creek have not been completed, for the reason that Congress and the Bureau of the Budget have drastically limited public expenditures for such recreational developments during the past few years so that funds could be made available for defense.

The concessioner has not felt justified in making the large investment necessary for development pending negotiations for a new contract, terms of which are not yet complete.

Regardless of the above reasons for delay, the need for development is urgent to accommodate the visitors. It is estimated that at least half of the water diverted for domestic use is presently consumed by large hiking parties and individuals who pass through the Ranch property but are not paying guests of the concessioner.

Travel to Grand Canyon NP has increased phenomenally since 1941, illustrated by the following figures:

YEAR	VISITORS
1941	431,816
1948	618,210
1950	654,348
1951	688,673

1952 to date exceeds 1951 by approximately 20,000 visitors.

For the above reasons, it is recommended that a further extension of time be requested in which to complete construction for beneficial use under the above water right. If possible, we would like to see the time extension granted to at least 1954.

H. C. Bryant
Superintendent

Copy to: The Director - Airmail

NB - Since time is short, copy of this memorandum is being sent airmail direct to the Washington Office. HCB

CELehnert:fja

08-19-1952: memorandum to superintendent from regional chief regarding proof of beneficial use under water right application a-1

NATIONAL PARK SERVICE
Region Three Office
Santa Fe, New Mexico

RADIO STATION KKH20
Message No. 54
Received from
Transmitted to KQC725-
8:35A M., Date 8-20-52
Operator Ratcliff

Radio Message

August 19 19 52

To: Superintendent, Grand Canyon

From: Regional Chief, Land and Recreation Planning

Refer Patraw's memorandum August 4 concerning proof of beneficial use under Water Right Application A-1766, Permit A-1094, Bright Angel Creek Diversions for Phantom Ranch. Please furnish information requested Dunn's memorandum July 25. Proof due on August 22 in Director's office.

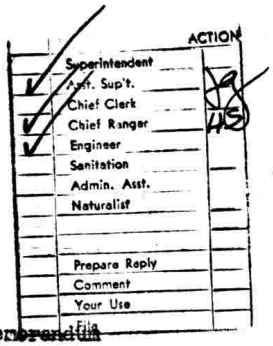
Milton J. McColm

Message File
Confirmation - X
File

08-21-1952: stamp of receipt



In reply refer to:
L54 GRAN-L



Region Three
Santa Fe, New Mexico

August 19, 1952

Air Mail



Memorandum

To: Director

From: Assistant Regional Director

Subject: Proof under Water Right Application A-1766, Permit A-1091, Bright Angel Creek Diversions for Phantom Ranch, Grand Canyon

We have not yet received the information requested in Mr. Dunn's memorandum of July 25 concerning this subject and have again asked the Superintendent to forward it as soon as possible.

Since the proof is due on August 22, it is our thought that perhaps you will wish to go ahead with making another request for an extension of time in this matter.

(SIGNED)

P. P. Patraw
Assistant Regional Director

In duplicate

Copy to: Supt., Grand Canyon ✓

08-04-1952: memorandum to superintendent from assistant regional director regarding proof under water right application a-1766,

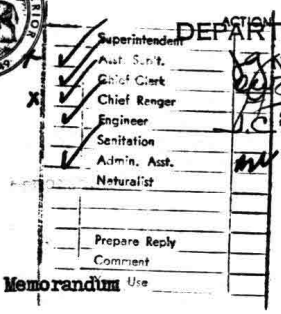


UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Region Three
Santa Fe, New Mexico

In reply refer to:
L54 GRAN-L



August 4, 1952



To: Superintendent, Grand Canyon

From: Assistant Regional Director

Subject: Proof under Water Right Application A-1766, Permit A-1094, Bright Angel Creek Diversions for Phantom Ranch, Grand Canyon

In connection with proof of beneficial use due August 22 there is attached a copy of Mr. Dunn's memorandum of July 25. Will you please comply with his request and furnish all of the data that is available.

Mr. Dunn proposes that you use a print of drawing 5120A from Docket No. 4 and mark on it the limits of the irrigated growth. A new print will be furnished by Mr. Dunn for Docket No. 4.

P. P. Patraw
Assistant Regional Director

Attachment

Copy to: Director (in duplicate)

In reply refer to:
L54 GRAN-L

July 25, 1952

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Branch

Subject: Proof under Water Right Application A-1766, Permit A-1094, Bright Angel Creek Diversions for Phantom Ranch, Grand Canyon National Park

Proof of full beneficial use of water under the subject application and permit is due on August 22 unless we request another extension of time. To make proof we should be able to state that on some specified date during the past two years the attendance, including employees, has reached close to 500 people, that there have been 17.7 acres of pasture and woodland under irrigation, and that there were about 165 or 170 mules in the corrals for the day or about double that number for half a day.

It is presumed that there has been no such extensive use of the area, but your confirmation is desired.

It also seems probable that the water claim is for a very remote future. Both to illustrate the rate of increasing use, if any, and to check on our ultimate needs, it will be helpful to have the maximum human and mule population at the Ranch on peak days during the past 3 to 5 years. We should also like to know whether any pastures have been established under the irrigation ditches.

During my last inspection, in 1947, the mules had destroyed any pasturage which may have been started earlier, and there was little prospect that grass would return with the trampling of even the small pack trains of that year. Accordingly, I think we should consider what we mean by long-time irrigation. If the irrigation is only to maintain the shade trees, I should like to know how much of the growth in the area has grown up as a result of the irrigation, and how much is natural growth which existed when the Ranch was first started.

If the Superintendent wishes to use the print of drawing 5120A, from Docket No. 4, to illustrate the limits of real irrigated

growth, I shall supply him with a new print for the docket. This analysis can be best shown on that map by sketching in the approximate limits of the irrigated growth and indicating the type of trees, bushes and grass in each.

(SGD.) A. VAN V. DUNN.
A. van V. Dunn
Chief, Water Resources Branch

In duplicate

RECEIVED JUN 3 1952

Total Park attendance has been relatively static since the war, as follows:

Year	Number of Visitors
1947	611,318
1948	618,210
1949	605,331

This is approximately 50% greater than the 431,816 visitors to the Park in 1941. It is also true that the average attendance at the 26 parks for which there were records in 1941 has been increasing at the same rate as at certain of those areas which have long records for some years before the war. The following table gives the computed attendance for 1947, 1949, and 1960 based on that trend, and the observed attendance for the first two years.

Year	Computed Attendance	Observed Attendance
1947	605,881	611,318
1949	678,296	605,331
1960	1,262,112	

It seems evident that attendance at Grand Canyon National Park returned to approximately the prewar trend by 1947. It lagged during the next two years, perhaps because of inadequate facilities, and the blizzards in the winter of 1948-1949. It seems probable that there may be an appreciable increase during the next decade, limited largely by the extent to which additional accommodations are provided. This will be reflected in a similar potential use of the Phantom Ranch Area.

From this analysis, it seems evident that the water demand at the Phantom Ranch Area should be reconsidered. Evidently the original water claim is greater than will be needed for many years to come. On the other hand, it does not seem desirable to limit the water rights by making proof on the basis of present use.



Chase

GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZONA

July 14, 1950

Memorandum

To: Regional Director, Region Three

From: Superintendent, Grand Canyon

Subject: Proof on Water Right Application A-1766, Permit A-1098, Phantom Ranch Area, Grand Canyon National Park

The following information has been obtained from the concessioner as requested in Mr. Dunn's memorandum of June 22.

On the peak day during the current season the Phantom Ranch accommodated a total of 80 persons and served a total of 66 meals. During the peak week a total of 841 meals were served and 181 persons accommodated.

In addition to the above the manager of Phantom Ranch estimates 15 hikers use the rest room and shower facilities per day.

H. C. Bryant
Superintendent

In duplicate

HBChase:iq

07-10-1960: memorandum to regional director from associate director regarding water use, phantom ranch area

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON 25, D. C.

In reply refer to:
L54 GRAN

JUL 10 1960

Memorandum

To: Regional Director, Region Three

From: Associate Director

Subject: Water Use, Phantom Ranch Area, Grand Canyon National Park

By memorandum of June 22, Mr. Dunn advised that proof will be due on August 22 on Water Right Application A-1766, Permit A-1094, for the appropriation of water at Phantom Ranch, and that he proposes to request an extension of time because such a small percentage of the authorized water is apparently being used.

Attached are two copies of his report of June 28, in which he estimates that only approximately 30% of the authorized quantity of water is being used, and that this is probably close to all that will be used unless there are extensive enlargements of facilities. He has also given an analysis of park attendance, based on studies he has made in connection with most of the national parks, which indicates that there could be a 100% increase in almost any national park or any developed area therein, within the next decade.

During the next year or two, before proof may become due again, it will be well for you to consider the optimum use of the Phantom Ranch Area and resulting water demand, and revise your master plan and PCP's as necessary in order that future water right procedure may be determined.

The attendance at the park for 1950 and 1951 may indicate whether the popularity of Grand Canyon National Park is to continue to grow in accordance with the general trend for other national parks. The next question will be how many of those visitors wish to visit Phantom Ranch and how far you consider it advisable to provide the additional facilities which may be necessary.

(SGD) A. E. DEMARAY

Associate Director

In duplicate

Attachments 2

AvanVDunn:sh

Copy to: Mr. Dunn

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON 25, D. C.

June 28, 1950

Status of Water Use
Phantom Ranch Area
Grand Canyon National Park

by

A. van V. Dunn
Chief, Water Resources Branch

An inspection of the Phantom Ranch Area was made in July 1947 to determine whether final water right proofs could be made under Amended Application No. A-1766, Permit A-1094. The original application called for all diversions directly from Bright Angel Creek by gravity. The amendment had been made to cover the shallow well with pump as the source of supply for the potable water.

The application provides for the use of the following quantities of water:

For domestic purposes		25,000 g.p.d.
For stock watering		2,000 g.p.d.
Irrigation of 17.70 acres at 5 AF/A/Annum, equivalent to uniform flow of	0.122 sec. ft.	78,850 g.p.d.
(maximum rate probably $\frac{17.7}{70}$ sec.ft. =	0.253 sec.ft.	163,518 g.p.d.)

There has been considerable flood damage at Phantom Ranch since the original application was filed in 1937. The well was substituted for surface diversions as a result of this damage. There has also been encroachment on the developed area. Photograph GC-47-D-1 shows the extensive construction which has been needed to maintain the diversion for the irrigation ditch.

The area was not irrigated to the extent suggested by the accompanying map NP-GC-5120A, which was filed with the amended application. Photograph GC-47-D-2 shows the upper portion of the Lodge area from the 40,000-gallon distribution reservoir. From the map there should be considerable irrigation between the employees' quarters and the restaurant, but there is practically nothing but desert scrub growth.



GC-47-D-1

GC-47-D-1 - Dam for Flood Control and Diversion - Phantom Ranch Development (near Diversion C) - July 1947



GC-47-D-2

GC-47-D-2 - Phantom Ranch Area - Grand Canyon - Looking Downstream (South) From Upper Employees' Quarters - July 1947
1. 40,000-gallon concrete reservoir.
2. Restaurant.
3. Employees' Quarters.

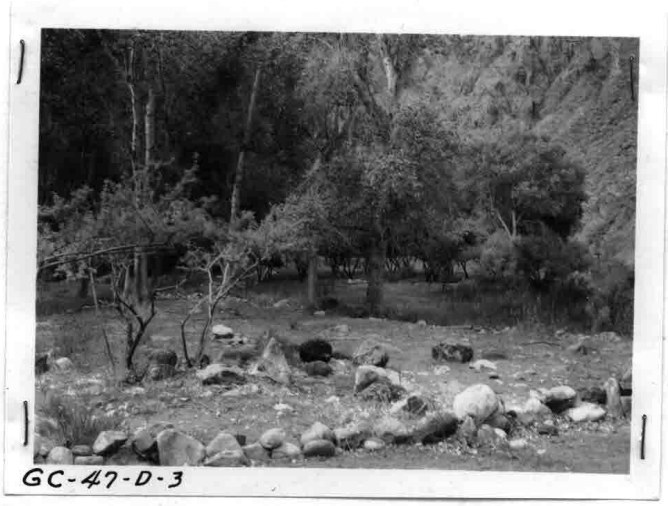
Photographs GC-47-D-3 and 4 show portions of the area between the restaurant and guide's quarters. There is a good stand of cottonwoods, but practically no grass except along the irrigation ditches. The soil is too largely coarse gravel and rock, and the trees have added shade to discourage the small vegetation. The small corral beyond the guide's quarters in GC-47-D-4 had absolutely no vegetation.

Photograph GC-47-D-5 shows the area at the mouth of Bright Angel Creek from the trail bridge across the Colorado River, the arrow pointing to the residence and laboratory of the operator of the river gauging station maintained by the Geological Survey. There was no irrigated area of 5.12 acres as shown on the map.

The following estimate of total beneficial water use per day in 1947 is based on the Lodge capacity and average facilitating personnel and stock being employed at the time. The allowance for 6 acres of irrigation is an arbitrary estimate. It seems quite evident that the water use did not exceed 30% of the appropriation authorized by Water Right Permit No. A-1094.

Estimate of 1947 Water Use at Phantom Ranch

Lodge capacity -			
Guest capacity - 21			
Employees - 6			
Total 27	@ 100 gpc/day =	2,700	g.p.d.
Gauging station operator, 1 @ 50 gpd =		50	"
Trail maintenance man and wife @ 50 gpc/day =		100	"
Telephone linemen, 2 @ 35 gpc/day =		70	"
Campers, 5 @ 35 gpc/day =		175	"
Mules -			
Guest - - 23			
Telephone crew - 2			
Trail maintenance - 1			
Supply train - 9			
Total 35	@ 12 gph/day =	210	"
Total domestic use		3,305	g.p.d.
Irrigation 6 acres of cottonwood, etc., @ 5 AF/A/Annum		30	A.F.



GC-47-D-3 - Typical Growth in Phantom Ranch Area - Grand Canyon National Park - July 1947



GC-47-D-4 - Phantom Ranch Lodge from Guide's Quarters (Looking North), July 1947



GC-47-D-5

GC-47-D-5 - Colorado River and Gauging Station Laboratory Area - Phantom Ranch Area - Grand Canyon National Park, July 1947

Total Park attendance has been relatively static since the war, as follows:

Year	Number of Visitors
1947	611,318
1948	618,210
1949	605,331

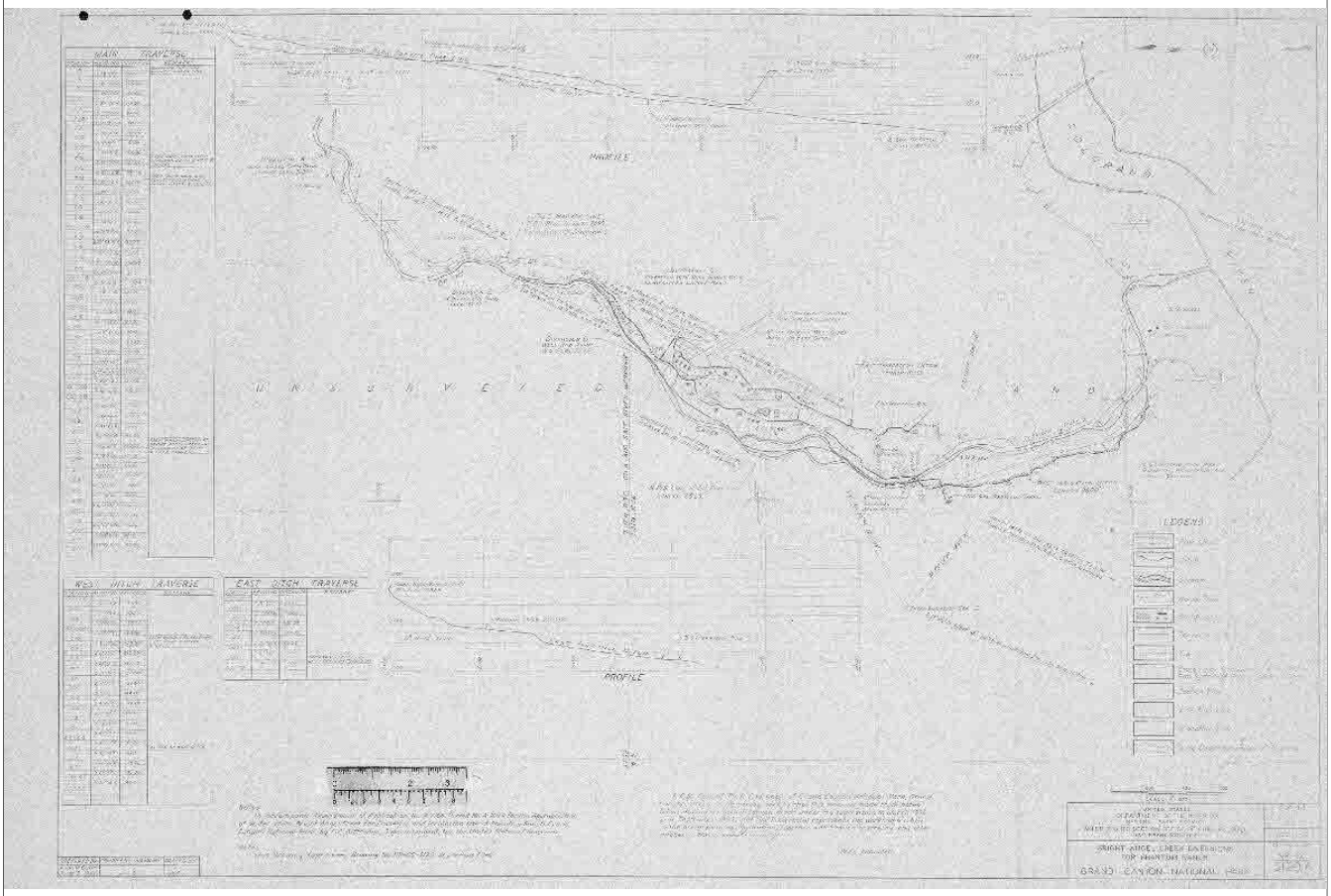
This is approximately 50% greater than the 431,816 visitors to the Park in 1941. It is also true that the average attendance at the 26 parks for which there were records in 1941 has been increasing at the same rate as at certain of those areas which have long records for some years before the war. The following table gives the computed attendance for 1947, 1949, and 1960 based on that trend, and the observed attendance for the first two years.

Year	Computed Attendance	Observed Attendance
1947	605,881	611,318
1949	678,296	605,331
1960	1,262,112	

It seems evident that attendance at Grand Canyon National Park returned to approximately the prewar trend by 1947. It lagged during the next two years, perhaps because of inadequate facilities, and the blizzards in the winter of 1948-1949. It seems probable that there may be an appreciable increase during the next decade, limited largely by the extent to which additional accommodations are provided. This will be reflected in a similar potential use of the Phantom Ranch Area.

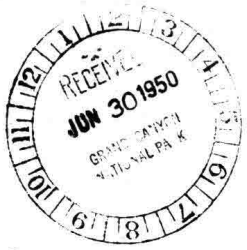
From this analysis, it seems evident that the water demand at the Phantom Ranch Area should be reconsidered. Evidently the original water claim is greater than will be needed for many years to come. On the other hand, it does not seem desirable to limit the water rights by making proof on the basis of present use.

06-06-1941: map of the bright angel creek diversion for the phantom ranch

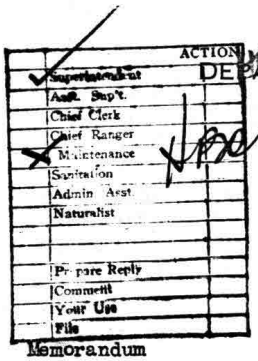


UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Region Three
Santa Fe, New Mexico



June 28, 1950



Memorandum

To: Superintendent, Grand Canyon

From: Regional Engineer

Subject: Proof on Water Right Application A-1766, Permit A-1094, Phantom Ranch Area, Grand Canyon National Park

There is enclosed copy of Mr. Dunn's memorandum of June 22 in which he suggested an extension of time for the proof of beneficial use under Water Right Application A-1766 at Phantom Ranch.

It is doubtful if we can prove up on beneficial use to the full amount of the water right at this time. However, it will be helpful if you will furnish us with the information requested in the last sentence of Mr. Dunn's memorandum, also, any other comments you care to make which may lead to a logical solution of this water right application.

J. R. Lassiter
Regional Engineer

In duplicate

Attachment

06-22-1950: memorandum to regional director from chief regarding proof on water right application a-1766, permit a-1094

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON 25, D. C.

In reply refer to:
L54 GRAN

June 22, 1950

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Branch

Subject: Proof on Water Right Application A-1766, Permit A-1094, Phantom Ranch Area, Grand Canyon National Park

Proof or extension of time on the above application is due on August 22. Unless there has been extensive change since my inspection in 1947, I propose to request an extension of time.

So far as I can determine, only about 8% or 10% of the water claimed in the application is actually being used for domestic and stock watering purposes, and about 15% of the claim for irrigation may be used. With flood damage, the irrigable portion of the developed area has been somewhat reduced. It also seemed to me, in 1947, that much of the area between the guide's quarters and the river might never be irrigated. There is also no record to show that the lodge and campground capacity is going to be appreciably increased in the foreseeable future, and therefore the domestic and stock watering demand may never approach the 27,000 gpd covered in the application. I am also forced to estimate the per capita use for these purposes because there are no meters, and the Regional engineering staff may differ with my estimates.

Accordingly, it will be helpful to have a reconsideration of our ultimate water demands, and have them reflected in the master plan, so that I may determine when to make final proof. It will also be helpful if the concessioner can supply bed and meal counts for peak days and the peak week of each season.

(SGD.) A. VAN V. DUNN.
A. van V. Dunn
Chief, Water Resources Branch

In duplicate

06-10-1950: memorandum to regional director from associate director regarding water use, phantom ranch area

ACTION

Superintendent
Asst. Supt.
Chief Clerk
Maintenance
Interpretation
Admin. Asst.
Naturalist

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON 25, D. C.

In reply refer to:
L54 GRAN

GRAND CANYON

Huh- Should list use after this to Dougpost-2 ?

JUL 10 1950

RECEIVED
JUL 19 1950
GRAND CANYON
NATIONAL PARK

Memorandum

To: Regional Director, Region Three

From: Associate Director

Subject: Water Use, Phantom Ranch Area, Grand Canyon National Park

By memorandum of June 22, Mr. Dunn advised that proof will be due on August 22 on Water Right Application A-1766, Permit A-1094, for the appropriation of water at Phantom Ranch, and that he proposes to request an extension of time because such a small percentage of the authorized water is apparently being used.

Attached are two copies of his report of June 28, in which he estimates that only approximately 30% of the authorized quantity of water is being used, and that this is probably close to all that will be used unless there are extensive enlargements of facilities. He has also given an analysis of park attendance, based on studies he has made in connection with most of the national parks, which indicates that there could be a 100% increase in almost any national park or any developed area therein, within the next decade.

During the next year or two, before proof may become due again, it will be well for you to consider the optimum use of the Phantom Ranch Area and resulting water demand, and revise your master plan and PCP's as necessary in order that future water right procedure may be determined.

The attendance at the park for 1950 and 1951 may indicate whether the popularity of Grand Canyon National Park is to continue to grow in accordance with the general trend for other national parks. The next question will be how many of those visitors wish to visit Phantom Ranch and how far you consider it advisable to provide the additional facilities which may be necessary.

(SGD) A. E. DEMARAY
Associate Director

In duplicate

Attachments 2

07-13-1950: stamp of receipt

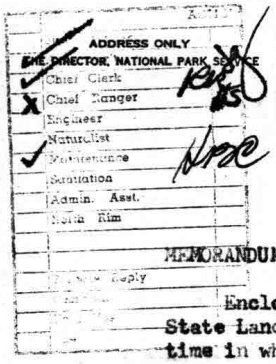


10-13-1948: memorandum to regional director from nps regarding request for extension of time

Grand Canyon

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
~~CHICAGO, ILLINOIS~~
Washington 25, D. C.





October 13, 1948.

MEMORANDUM for the Regional Director, Region Three.

Enclosed are two copies of my letter of August 17 to the State Land Commissioner of Arizona, requesting an extension of time in which to complete full beneficial use of water under Water Right Application A-1766, Permit A-1094, for appropriation of waters of Bright Angel Creek for use at Phantom Ranch in Grand Canyon National Park; and two copies of an order dated September 8, granting an extension of time to August 22, 1950, in which to complete construction work, and August 22, 1952, within which to make complete application of water to beneficial use, under this application and permit.

These should be inserted at the top of the assemblies of Grand Canyon Deed 22 in your office and at the park.

(SGD.) A. VAN V. DUNN.
Chief, Water Resources Branch.

Enclosure 337.
In duplicate.

FOR VICTORY



GC-47-D-1

GC-47-D-1 - Dam for Flood Control and Diversion - Phantom Ranch Development (near Diversion C) - July 1947



GC-47-D-2

GC-47-D-2 - Phantom Ranch Area - Grand Canyon - Looking Downstream (South) From Upper Employees' Quarters - July 1947
1. 40,000-gallon concrete reservoir.
2. Restaurant.
3. Employees' Quarters.

07-19-1950: stamp of receipt





GC-47-D-3

GC-47-D-3 - Typical Growth in Phantom Ranch Area - Grand Canyon National Park - July 1947



GC-47-D-4

GC-47-D-4 - Phantom Ranch Lodge from Guide's Quarters (Looking North), July 1947

07-19-1950: stamp of receipt





GC-47-D-5 - Colorado River and Gauging Station Laboratory Area - Phantom Ranch Area - Grand Canyon National Park, July 1947

07-19-1950: stamp of receipt, page 2cont



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
CHICAGO, ILLINOIS

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

54

August 7, 1945.

MEMORANDUM for the Regional Director, Region Three.

Reference is made to your memorandum of July 13 with enclosed original water right permits and certificates relating to Grand Canyon Deeds Nos. 19 through 28, and a memorandum of July 10 from Superintendent Bryant to you. The procedure to complete all assemblies has become somewhat involved since the suggestions in my memorandum of June 27 were not followed, but I think we can still straighten things out without sending in any complete files.

The "original deeds" for the Director are now nearly complete. As Exhibit A, I enclose a list of the items still needed. Part of these items are what Mr. Bryant calls routine correspondence, but they have special significance as orders or instructions from the State Water Commissioner or his representatives. Hence, the original letters should be in the Director's assemblies for permanent record.

There are numerous orders granting extensions of time, but only a part of them are listed. In the other cases we have signed and sealed copies. It would be better to have all originals, but the main thing is to obtain some record of these orders with the Water Commissioner's signature and seal. Those listed will complete the files.

In the case of Deed No. 22, Application No. A-1766, Mr. Bryant seems to have sent us the original application-permit. A year or so ago the Park advised that it could not find the original and we purchased a certified copy from the Water Commissioner. It does not matter whether we have the original or the certified copy, but I wish to make certain that the one we have received is the original and should not have a certificate attached. If I am correct, then the certified copy, with certificate attached, should go in the assembly of the deed, either in your office or at the Park, in place of the copy of the certified copy which you are each supposed to have.

In connection with each water right covered by Deeds Nos. 19 through 27, but not No. 28, you prepared a very excellent summary on December 2 or 3, 1938, as Superintendent, which gave the action which had been taken, and the payments which had been made to those dates. Some of the summaries were dated on each of the two days as they were typed. The Director and I each had copies, and the original or a copy is reported to have been sent to the Regional Office. I assume that a copy was also retained in the Park. In making up the assemblies in June, one set of which I sent to you, I placed in each one a copy of the summary applicable thereto. Hence, I should like one of the other sets, and the other one should be used in the fourth deed assemblies which are still to be made for one field office.



In preparing the sample assembly of Deed No. 27, Application No. A-2254, Permit No. A-1514, we had to use one of our sets of the notices and proofs. Both you and the Superintendent have copies, and it is one of these sets which we now need in exchange. The other set will go in the fourth assembly.

If the fourth deed assemblies were to be made up here it would be necessary for both you and Mr. Bryant to send me all of your water right files because I do not know which may lack some of the instruments. It will be easier if the one who now has the sample assemblies will compare them with his old files and remove any of the instruments he finds in the latter which can be used in the fourth assemblies. These, then, should be sent to the other office with the sample assemblies and the process repeated there. A fourth set of assemblies should then be complete, and if not we will make copies of the remaining instruments on request. As Exhibit B, I enclose two copies of the lists of instruments which should be in each assembly except for the letter of request, notice of completion, and anticipated order of extension which are now being circulated or requested in connection with Applications A-1765 and A-1766.

There are also enclosed a copy of Certificate No. 723, issued on Application No. A-1764, which can be used in the fourth assembly of Deed No. 20, and a copy of the order of April 24, 1944, granting an extension of time on Applications A-1880 and A-1881, which can be used in either Deed No. 25 or Deed No. 26. These now become surplus in this Office.

In connection with orders granting extension of time, we are still holding a few copies which will become surplus when we receive the originals. It seems probable, therefore, that they will prove to be the instruments you may lack.

(SGD.) A. VAN V. DUNN
Chief, Water Rights Division.

AvVD:sh.

Enclosure 274.
In duplicate.

August 7, 1945.

EXHIBIT A

List of original instruments to be sent to Director
to complete original Grand Canyon deeds.

1. Deed 19:
   Summary sheet of instruments, payments, etc., by M. R. Tillotson, dated December 3, 1938.

2. Deed 20:
   Summary sheet of instruments, payments, etc., by M. R. Tillotson, dated December 3, 1938.

3. Deed 21:
   (a). Summary of instruments, payments, etc., by M. R. Tillotson, dated December 3, 1938.
   (b). Order dated April 23, 1942, extending time under Application No. A-1765, Permit A-1093, with actual signature of Jesse C. Wanslee. (Our records show that we made copies of this and returned the original to the Superintendent on April 30, 1942.)

4. Deed 22:
   (a). Summary similar to above.
   (b). Letter of August 23, 1941, from Jesse C. Wanslee, State Water Commissioner, to H. C. Bryant, Superintendent. (Original is wanted for Director's assembly and a copy should be found or made for field assembly.)
   (c). Amended Application No. A-1766, Amended Permit No. A-1094, seems to be original -- where is certified copy?

5. Deed 23:
   (a). Summary similar to above.
   (b). Order, dated November 9, 1942, extending time under Application No. A-1878, Permit No. A-1192, with actual signature of State Water Commissioner. (Original sent to Superintendent November 16, 1942, and copy sent to Region Three on the same date.)

6. Deed 24:
   (a). Summary similar to above.
   (b). Letter of February 28, 1944, from Tessie L. Flynn, Secretary, Water Division, State Land Department, to Superintendent. (Original wanted.)

7. Deed 25:
   (a). Summary similar to above.
   (b). Letter of October 16, 1939, from Commissioner Jesse C. Wanslee to J. V. Lloyd. (Original wanted.)
   (c). Letter of February 24, 1944, from Tessie L. Flynn, Secretary, Water Division, State Land Department, to Superintendent. (Original wanted.)
   (d). Letter of April 24, 1944, from Engineer Edwin T. Stewart, Water Division, State Land Department, to John M. Davis, Acting Superintendent, transmitting order and relating to amendments. (Original wanted.)

8. Deed 26:
   (a). Summary similar to above.
   (b). Letter of October 16, 1939, from State Water Commissioner Jesse C. Wanslee to J. V. Lloyd. (Original wanted.)
   (c). Letter of February 24, 1944, from Tessie L. Flynn, Secretary, Water Division, State Land Department, to Superintendent, advising of expiration of extension of time.

9. Deed 27:
   (a). Summary similar to above.
   (b). Notice of Beginning of Construction, dated May 1941.
   (c). Notice of Completion of Construction, dated May 1941.
   (d). Notice of Complete Application of Water to Beneficial Use. (About 1942.)
   (e). Proof of Appropriation of Water, dated January 5, 1943.

10. Deed 28:
   (a). Letter of August 23, 1941, from State Water Commissioner Jesse C. Wanslee to H. C. Bryant regarding Amended Application A-1766, in which the last paragraph gives instructions and information on this filing. (Original wanted.)
   (b). Letter of January 9, 1942, from Engineer Edwin T. Stewart to J. M. Davis, recommending against issuing permit until license on Application No. A-1766 is granted. (Original wanted.)

August 7, 1945.

EXHIBIT B

List of instruments in Grand Canyon deeds
(listed from bottom up in each deed).

Deed 19:
1. File Map NP-GC-5113.
2. Application A-1735, Permit A-1091.
3. Certificate 722.
4. Summary by M. R. Tillotson, dated December 3, 1938.

Deed 20:
1. File Map NP-GC-5124.
2. Application A-1764, Permit A-1092.
3. Certificate 723.
4. Summary by M. R. Tillotson, dated December 3, 1938.

Deed 21:
1. File Map NP-GC-5124.
2. Application A-1765, Permit A-1093.
3. Summary by M. R. Tillotson, dated December 3, 1938.
4. Letter of April 22, 1942, from Superintendent Bryant to State Water Commissioner requesting extension of time.
5. Order Granting Extension of Time to December 31, 1945.

Deed 22:
1. File Map NP-GC-5120.
2. Application A-1766, Permit A-1094. (May 15, 1937).
3. Summary by M. R. Tillotson, dated December 3, 1938.
4. Letter of July 8, 1941, from Engineer Stewart to Superintendent Kittredge regarding amendment.
5. Amended File Map NP-GC-5120A.
6. Amended Application A-1766, Amended Permit A-1094. (Aug. 22, 1941.)
7. Letter of August 23, 1941, from State Water Commissioner to Superintendent regarding approval of amended application.
8. Notice of Beginning of Construction.
9. Letter of September 23, 1941, from Acting Superintendent Carrel to State Water Commissioner advising that full water use had not been made and suggesting construction to be incomplete.
10. Copy of Certificate attached to copy of Permit purchased from State Water Commissioner when original was reported lost.

Deed 23:

1. File Map NP-GC-5136.
2. Application A-1878, Permit A-1192 (Cottonwood Camp).
3. Summary by M. R. Tillotson, dated December 2, 1938.
4. Letter of September 11, 1942, from A. van V. Dunn to State Water Commissioner, requesting extension of time.
5. Letter of September 15, 1942, from Tessie Flynn to A. van V. Dunn, acknowledging request for extension of time.
6. Letter of November 6, 1942, from A. van V. Dunn to State Water Commissioner, regarding extension of time.
7. Order Granting Extension of Time to November 27, 1944.
8. Letter of November 10, 1941, from State Water Commissioner to A. van V. Dunn, regarding extension of time.
9. Letter of December 6, 1944, from Dunn to Water Division, requesting extension of time.
10. Order Granting Extension of Time to November 27, 1947. (Director's original held by Dunn.)

Deed 24:

1. File Map NP-GC-5137A.
2. Application A-1879, Permit A-1193.
3. Summary by M. R. Tillotson, dated December 2, 1938.
4. Letter of February 28, 1944, from Secretary, Water Division, to Superintendent, regarding potential lapse.
5. Letter of March 1, 1944, from Acting Superintendent to State Water Division, declaring abandonment of this water claim.

Deed 25:

1. File Map NP-GC-5113.
2. File Map NP-GC-5135.
3. Application A-1880, Permit A-1194.
4. Summary by M. R. Tillotson, dated December 2, 1938.
5. Letter of October 13, 1939, from J. V. Lloyd to State Water Commissioner, requesting extension of time.
6. Letter of October 16, 1939, from State Water Commissioner to J. V. Lloyd, stating he cannot extend time.
7. Letter of November 20, 1939, from Acting Supt. Bryant to State Water Commissioner regarding extension of time.
8. Order Granting Extension of Time to November 27, 1942.
9. Letter of November 25, 1942, from A. van V. Dunn to Regional Director, Region Three, regarding renewal.
10. Letter of February 24, 1944, from Tessie Flynn to Superintendent regarding lapse and reinstatement.
11. Letter of April 22, 1944, from Acting Superintendent John M. Davis to Tessie Flynn requesting extension of time.
12. Order Granting Extension of Time to November 27, 1948.
13. Letter of April 24, 1944, from Engineer Stewart to John M. Davis transmitting extension and explaining amendment.

Deed 26:

1. File Map NP-GC-5135.
2. Application A-1881, Permit A-1195.
3. Summary by M. R. Tillotson, dated December 2, 1938.
4. Letter of October 13, 1939, from J. V. Lloyd to State Water Commissioner.
5. Letter of October 16, 1939, from State Water Commissioner to J. V. Lloyd.
6. Letter of November 20, 1939, from Acting Superintendent Bryant to State Water Commissioner.
7. Order Granting Extension of Time to November 27, 1942.
8. Letter of November 25, 1942, from A. van V. Dunn to Regional Director, Region Three, regarding renewal.
9. Letter of February 24, 1944, from Tessie Flynn to Superintendent regarding lapse and reinstatement.
10. Letter of April 22, 1944, from Acting Superintendent John M. Davis to Tessie Flynn, regarding extension of time.
11. Order Granting Extension of Time to November 27, 1948.
12. Letter of April 24, 1944, from Engineer Stewart to John M. Davis transmitting extension and explaining amendment.

Deed 27:

1. File Map NP-GC-6986.
2. Application A-2254, Permit A-1514.
3. Notice of Beginning of Construction.
4. Notice of Completion of Construction.
5. Notice of Complete Application of Water to Beneficial Use.
6. Proof of Appropriation.
7. Certificate No. 1249.

Deed 28:

1. File Map NP-GC-5120A.
2. Application A-2511, filed September 23, 1941.
3. Letter of August 19, 1941, from Acting Superintendent Davis, to State Water Commissioner.
4. Letter of August 23, 1941, from State Water Commissioner to Superintendent.
5. Letter of January 9, 1942, from Engineer Stewart to Acting Superintendent Davis.
6. Memorandum of January 13, 1942, from Superintendent Bryant to Regional Director, Region Four.
7. Memorandum of January 19, 1942, from A. van V. Dunn, to Superintendent.
8. Letter of August 18, 1942, from A. van V. Dunn, to State Water Commissioner.
9. Letter of August 20, 1942, from State Water Commissioner to A. van V. Dunn.

7A. Letter of January 22, 1942, from Superintendent to Engineer Stewart. (This should follow item 7.)

06-30-1945: memorandum to chief from acting superintendent regarding water rights status on application a-1765 and a-1766

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZONA

NATIONAL PARK SERVICE RECEIVED JUL 3 - 1945 CHIEF CLERK'S OFFICE

Name	Date
Burney	
Dunn	

June 30, 1945.

MEMORANDUM for the Chief, Water Rights Division.

Reference is made to Mr. Dunn's memorandum of June 23, to the Regional Director, Region Three, relative to water rights status on Application A-1765 and A-1766.

Application A-1766 may be reported as completed as of this date.

Application A-1765 will require a further extension, as no work on this project has been done.

John M. Davis,
Acting Superintendent.

CC: Reg Dir Region Three

Mr. Van Dunn

C
O
P
Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Grand Canyon National Park
Grand Canyon, Arizona

JUN 10 1944

June 6, 1944.

MEMORANDUM for the Regional Director, Region Three.

Reference is made to Hydraulic Engineer Dunn's memorandum of June 1 to you (copy of which was air mailed to this office) concerning posting of notices of appropriating water.

On February 27, 1937, former Superintendent Tillotson wrote the Director (a copy of which was sent Attorney Taylor) in substance that the posting of notices was not required "except in unusual cases involving the appropriation of large quantities of water and where there was likely to be controversy." This is substantiated by a letter from former State Water Commissioner Stewart under date of February 17, 1937.

No posting or advertising has been done by this park in connection with any Water Rights Applications.

(sgd.) John M. Davis
John M. Davis,
Assistant Superintendent.



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA
601 Sheldon Building

	ACTION	
	Superintendent	
✓	[illegible]	
	Chief Ranger	
	Chief Clerk	
✓	[illegible]	✓
	Nature Gui.	
	CCC Supt.	
	Prepare Reply	✓
	Comment	
	[illegible]	

August 12, 1942.

MEMORANDUM for the Superintendent,
Grand Canyon National Park.

Reference is made to Mr. Davis' memorandum of August 7 regarding Water Right Application No. A-2511, with particular reference to the date of acceptance.

The water right for Phantom Ranch consists of two parts — Amended Application A-1766, Permit A-1094, for the appropriation of water to the total quantity of the original application of the same number, and also Application A-2511 for the appropriation of water to the full extent of the well and pump installation in excess of the original quantity of the former application.

My memorandum of January 31, 1942, related only to the amended application and we did not at the time know what application number would be assigned for the extra quantity of water. We have since learned that the application number was A-2511. We still do not know what permit number was granted nor what date this application was accepted, and both of these items are important.

It may be that the State Water Commissioner did not actually grant the permit at this time, as there was some discussion regarding perfection of Permit No. A-1094 before we could make any use under the later supplemental application. It is also not necessarily true that the later application was accepted on the same day that the amended Application A-1766 was accepted, though this seems possible.

The question now therefore is whether you have actually received your copy of Application A-2511 with the permit granted and filled in on the reverse thereof, or whether it is still being held by the Water Commissioner until the original claim is perfected. If you have the official copy we should like the information, but if it is still in the hands of the State Water Commissioner we need only know if this is the case.

A. van Dam
Hydraulic Engineer.

August 7, 1942.

MEMORANDUM for the Regional Director, Region Four.
Attention: Hydraulic Engineer Dunn

Reference is made to Mr. Dunn's memorandum of August 3 relative to Water Right Application No. A-2511 for the well development at Phantom Ranch.

The date of acceptance of this application is August 22, 1941, as is indicated in Mr. Dunn's memorandum to the Director, dated January 31, 1942.

(SGD.) JOHN M. DAVIS

Assistant Superintendent.

CMC/ja

FILE COPY

08-03-1942: memorandum to superintendent from hydraulic engineer regarding date of acceptance of water right application no. a

RECEIVED
AUG 5
GRAND CANYON
NATIONAL PARK

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA

	ACTION	
✓	Superintendent	HEB
✓	Asst. Supt.	
	Chief Ranger	
	Chief Clerk	
✓	Engineer	✓
	Naturalist	
	CCC Supt.	
	Prepare Reply	✓
	Comment	

August 3, 1942.

MEMORANDUM for the Superintendent,
Grand Canyon National Park.

Reference is made to our memorandum of January 19 requesting the date of acceptance of Water Right Application No. A-2511 for the well development at Phantom Ranch.

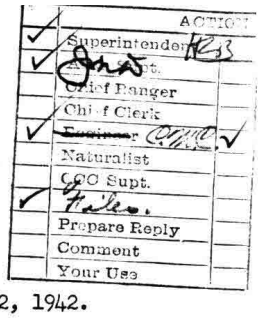
Your reply of January 22 answered most of the questions except the date of acceptance, and we should like to request that you either supply this information for our records or lend us your copy of the application for sufficient time to bring our copies up to date.

D. Grant Dunn

Hydraulic Engineer.



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA
601 Sheldon Building



REGISTERED MAIL

March 12, 1942.

MEMORANDUM for the Superintendent,
Grand Canyon National Park:

We enclose certified copy of Amended Application No. A-1766, Amended Permit No. A-1094, covering Bright Angel Creek diversions for Phantom Ranch. Since this is a certified copy from the State Engineer it does not include your signature, and it is therefore very important to see that the certificate attached at the back remains attached as it has been received. This is now the official copy of the water right application in the possession of the Park Service unless you locate the original, in which case I believe both should be kept as if of equal value.

A. Brand Dean
Hydraulic Engineer.

Enclosure 2121935.

cc: Director.
Region Three.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

February 5, 1942.

MEMORANDUM for Hydraulic Engineer Dunn.

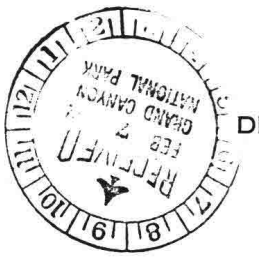
Reference is made to your memorandum of January 31, requesting a search for a copy of the amended Water Right Application No. A-1766, Permit No. A-1094, for the appropriation of water at Grand Canyon National Park. We have made a search, and found only a typewritten copy transmitted with your memorandum of September 8, 1941. It appears that the copy on which the permit was signed personally by State Water Commissioner Jesse C. Wenslee was not received in this Office.

(SGD) G. A. Moskey
Chief Counsel.

cc- Grand Canyon
Region Three

	ACTION	
	Superintendent	
	Asst.	✓
	Chief Ranger	
	Chief Clerk	
	Engineer CMC	✓
	Naturalist	
	CCC Supt.	
	[illegible]	✓
	Prepare Reply	
	Comment	
	[illegible]	✓

02-05-1942: memorandum to superintendent from nps regarding missing copy of application a-1766, permit a-1094



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA

ACTION	
Superintendent	
✓ Asst. Jones	
Chief Ranger	
Chief Clerk	
Engineer	✓
Naturalist	
CCC Supt.	
Prepare Reply	
Comment	
Your Use	

February 5, 1942

MEMORANDUM for the Superintendent,
Grand Canyon National Park:

Reference is made to our memorandum of January 31 with regard to missing copy of Application A-1766, Permit A-1094, Bright Angel Creek, and as to the identity of Application A-2511.

On inquiry we have been advised by the State Water Commissioner of Arizona that the original of the amended Application A-1766 is not in his files and that a duplicate certified copy will cost $2.80. We are still awaiting a reply to inquiries to the Director and to the Regional Office as to whether they might have the original before taking further action with regard to the duplicate copy.

In the same letter the State Water Commissioner verified the fact that Application A-2511 was that for the supplemental supply from the well at Bright Angel Creek to cover the well capacity in excess of the quantity covered by Application A-1766 as amended. Therefore, there is no reason for further investigation in that matter.

A. Grant Dunn
Hydraulic Engineer.

cc: Director.
Region Three.



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA

January 31, 1942.

MEMORANDUM for the Superintendent,
Grand Canyon National Park:

Reference is made to your memorandum of January 29, 1942, regarding the location of the original of the amended application and permit, Nos. A-1766 and A-1094 respectively.

We enclose copies of the requested letters and a copy of a memorandum we have just sent to the Director and the Regional Director in an attempt to determine whether by any chance the original was inadvertenly sent to either of those offices.

If the original, actually signed by State Water Commissioner Wanslee, is not located in either of these offices or your own, it will probably be more desirable to obtain a certified duplicate copy from the State Water Commissioner rather than to make one for you here which is not actually signed. While waiting for the investigation in Washington and the Regional Office, we shall check up on the procedure to follow in obtaining the necessary authentic type of copy which will have the value of the original for your records.

A. Vand. Dean
Hydraulic Engineer.

Attachments.

FROM		
	Superintendent	
	Asst. Superintendent	
	Chief Clerk	
	Purchasing Clerk	
	Storekeeper	
	Cost Accountant	
	Timekeeper	
	File Clerk	
	Stenographer-Secretary	
	Sa[illegible] Inspector	✓
	Park [illegible]	
	Chief [illegible]	
	Asst. [illegible] Ranger	
	Information Desk	
	Park Naturalist	
	C. C. C.	
	Plumber	
	Electrician	
	Mechanic	
FOR	Action	✓
	Comment: Verbal	
	Comment: Memorandum	
	Prepare Reply for Supt. Sign	
	Initial and Return	
	Initial and Return to Files	

Supt., Gra- anyon N. P.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA

January 31, 1942.

MEMORANDUM for the Director:

Reference is made to our memoranda of September 6 to the Superintendent of Grand Canyon National Park and September 8 to you regarding amended Water Right Application No. A-1766, Permit A-1094, with one of which was transmitted a copy of said amended application.

We are advised by Park Engineer Carrel that they cannot now find the original of said amended application in their files, although on September 12 they acknowledged receipt of the memoranda by a memorandum answering questions therein.

The copy of application which they should have would be the one on which the permit is actually signed by State Water Commissioner Jesse C. Manslee on the 22nd of August 1941. They now have only a copy, which is apparently an incomplete copy.

It occurs to us that the original as just described was inadvertently sent to you or to the Regional Director. Before we take steps to obtain a certified copy from the State Engineer, we request that you and the Regional Director investigate your records and advise as to the type of copy you have. If the original is located in either office, it will probably be desirable to return it to the Superintendent and let us provide you with a copy in order that the original will be filed in accordance with the practice which has been followed throughout — namely, at the park itself.

(SGD.) A. VAN V. BURN

Hydraulic Engineer.

cc: Supt., Grand Canyon N. P.
Region Three.

01-29-1942: memorandum to hydraulic engineer from park engineer regarding water rights applications at phantom ranch

January 29, 1942.

For Hydraulic Engineer Dunn.

MEMORANDUM for the Regional Director, Region Four.

Reference is made to yours of January 22, relative to Water Rights Applications at Phantom Ranch.

A further search of our files does not bring to light any letter from you of September 6 with enclosures. We do find a carbon copy of a memorandum from Attorney Johnson to the Director, dated September 8, with which he enclosed a copy of the Amended Application and used enclosure Tage No. 2136768, the same number you say you used in transmitting your enclosures with your memorandum of September 6.

It is noted from Mr. John's memorandum that his distribution provided: "cc: Regional Director, Region Three, with copies of enclosures" and "Supt. Bryant". There is a possibility that our copy went to the Regional Office.

The copy of the Amended Application in our files is incomplete as to the Permit and dates.

If you are unable to locate these papers, I would suggest that you send us a copy of Mr. Wansley's letter of August 23, a copy of the completed Amended Application, and a copy of your memorandum of September 6 so that our files may be complete.

After again reviewing the entire matter, I am in agreement with you as regards the use of number A-2511 for the new application for use of a supplemental supply provided through the installation of the well and pumps. However, we will check this with the State Water Commissioner at the first opportunity.

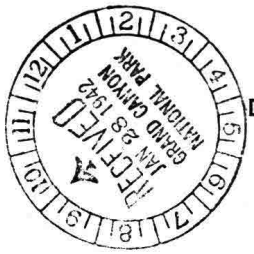
We will keep in mind your suggestion of withdrawal of the new application should it be found that it will be impossible to make full use of the amount of water provided for in Application A-1766, Permit A-1094, before the time limit expires.

(SGD) C. M. CARREL

Park Engineer.

CMC/abh

FILE COPY



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA

January 24, 1942.

MEMORANDUM for the Superintendent,
Grand Canyon National Park:

Reference is made to your memorandum of January 22, 1942, regarding Water Right Applications A-1766, Permit A-1094, and A-2511 for Phantom Ranch.

As requested in your memorandum of September 3, 1941, our records show that your original copy of Application No. A-1766 as amended, and the original letter of August 23, 1941, from the State Engineer to you, were returned with my memorandum to you of September 6, 1941. These instruments bore tag "Enclosure 2136768." By memorandum of September 12, 1941, Acting Superintendent Davis replied to indicate that the requirements of the memorandum of September 3, 1941, were satisfied. A complete set of copies was sent to the Director and the Regional Director with a memorandum from Attorney Johnson of September 8, 1941.

We can supply another copy of the State Engineer's letter and of the amended application and permit, but they will note have the value of the originals. Hence, please check your files.

Application No. A-1766, Permit A-1094, as amended, only covered the quantity of water claimed in the original. The new well and pump installation permitted the diversion of more water than claimed under that permit. As suggested in the State Engineer's letter to Superintendent Kittredge of July 8, 1941, we prepared an application for a supplemental supply from the well as a claim to increasing water use after full use had been made of the quantity covered by amended Permit A-1094. Contrary to your suggestion in the memorandum of January 22, 1942, we believe Application No. A-2511 to apply to the supplemental supply.

Since the application will not be returned to you until the permit is issued, the only way to verify the matter is to ask the State Engineer. We suggest that you do so by letter, or on your next trip to Phoenix. The whole reason for deferring the issuance

of a permit, as covered by our assembled correspondence of January 9 from the State Engineer, yours of January 13, ours of January 19, and your final reply to the State Engineer of January 22, is to defer the proof under the supplemental application until the full use is made under Permit A-1094.

As a matter of fact, you are having so little travel to Phantom Ranch, and consequently so little water use, that proof under A-1094 seems remote; and the actual need for Application A-2511, if that is the supplemental supply, is questionable and a mere precaution. That is why I requested the additional records of use during the coming year, in my memorandum of January 19, and suggested that we might reconsider the whole problem next fall. Rather than seem too grasping, and to keep the State Engineer interested in granting extensions of time under A-1094, we might withdraw the later Application A-2511 at the last minute before a permit is granted and filing fee is charged. We should not do so, however, until we are reasonably confident that the 25,000 gpd for domestic use and 2000 gpd for stock watering, in Permit A-1094, will be ample for the area needs for at least 15 or 20 years.

There is a danger of feeling that there will be a continuous increase forever, but it seems more probable that within the next 20 years the attendance and water demand will become static for several reasons. Further, with more storage, the 27,000 gallons per day could be diverted to provide far more than that for the few peak travel days which you probably have. That is, a reservoir of 200,000 gallon capacity would permit the use of 47,000 gpd for 10 days under Permit A-1094, if the demand then dropped enough below 27,000 gpd to permit the reservoir to refill. The use of the larger reservoirs, besides being more conservative of the water right, would provide better fire protection.

The reservoirs cost $15,000 or more, but the particular water right for the supplemental water diversion will cost less than $100 because there are no more maps to draw. Therefore, the final procedure is monetary and a question of how long the State Engineer will grant extensions for perfection of rights.

A. Wood Dunn
Hydraulic Engineer.

cc: Director.
Region Three.

660-45.7

January 22, 1942.

MEMORANDUM for the Regional Director, Region Four,
Attention: Hydraulic Engineer.

Reference is made to yours of January 19, 1942 regarding Application No. A-2511 - Bright Angel Creek.

In checking our files we are unable to find the letter from the State Water Commissioner, dated August 28, 1941, to which you refer. We do find a memorandum to you, dated September 3, 1941, in which we transmitted a copy of Mr. Wanslee's letter of August 23, 1941, together with the amended application. It is presumed that the amended application was given a new number, A-2511, but our copy does not show the filing date.

We do not find in our files any indication of your having complied with our request of September 3 to return the letter from Mr. Wanslee and the Amended Application.

There is enclosed a copy of our letter to Mr. Stewart in answer to his letter of January 9, a copy of which was sent you on January 13. As regards the status of Application No. 1880 - Auxiliary Supply for the South Rim, there are no developments in connection with this project, and, in all probability, there will be none during the war period. Assistant Engineer Davenport of the Santa Fe Railway Company has made some preliminary studies and estimates, but no actual survey field work has been authorized.

(SGD) H. C. BRYANT

Superintendent.

Enclosure

CMC/abh

January 19, 1942.

MEMORANDUM for the Superintendent,
Grand Canyon National Park:

Reference is made to your memorandum of January 13, 1942, regarding Water Right Application No. A-2511.

We assume that this application is the one for the auxiliary supply from the well at Phantom Ranch, but we had not been advised of the application number which had been assigned. If this is the application in question we should certainly approve of the plan to keep it pending. The longer we can keep the priority of last summer without having to prove use, the better it will be, and the procedure suggested seems to do just that.

Meantime, may we request that you send us the date that the application was filed and a copy of the State Engineer's letter of August 28, 1942, in order that our records will be complete. Probably the letter of August 28 will answer the question of date of filing and priority.

As to proof of use under the original claim, Application No. A-1766, Permit A-1094, as amended, we seem to have a long way to go before the full use is made. From Mr. Carrel's memorandum of September 30, 1941, and the one from Acting Superintendent Davis of September 12, we seem to have made full use of the quantity allotted to irrigation, but to have used only about 6500 gpd for domestic purposes, where the claim is for 25,000 gpd, and to have used only about 400 gpd for stock watering where the claim is for 2000 gpd. This, however, is only our best estimate, and we should actually have measured values. Now that a pump is used instead of the gravity line, I wonder if you could keep a record of the water used and population using it day by day during the season when travel is heaviest in order to have more reliable figures. All we want is the water used for non-irrigation purposes. If such data can be sent to this office by next fall, we may wish to reconsider the whole idea of the claims.

May we also refer you to my memorandum of June 20, 1941, regarding the auxiliary supply from Bright Angel Creek for the South Rim, covered by Application No. A-1880, Permit No. A-1194. We should be considering what action will have to be taken with relation to that claim during the coming summer.

Hydraulic Engineer.



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA

January 19, 1942.

MEMORANDUM for the Superintendent,
Grand Canyon National Park:

Attention is directed to your memorandum of January 13 enclosing a copy of a letter from State Engineer Stewart of January 9 on our Application No. A-2511, Bright Angel Creek.

Inasmuch as you advise that we could not make proof of full use of water at this time, that it would be impossible to do so, we concur in your recommendation to keep the application pending until 1945. The State Engineer also indicates his satisfaction with keeping the application pending.

Albert A. Thurson
Attorney.

FROM		TO
	Superintendent HCS	✓
	Asst. Superintendent	✓
	Chief Clerk	
	Purchasing Clerk	
	Storekeeper	
	Cost Accountant	
	Timekeeper	
	File Clerk	
	Stenographer-Secretary	
	Inspector	✓
	Chief Ranger	
	Asst. Chief Ranger	
	Information Desk	
	Park Naturalist	
	C. C. C.	
	Plumber	
	Electrician	
	Mechanic	
FOR	Action	
	Comment: Verbal	
	Comment: Memorandum	
	Prepare Reply for Supt. Sign	
	Initial and Return	
	Initial and Return to Files	

C.M.C.
1/22/42

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZONA

January 13, 1942.

MEMORANDUM for the Regional Director, Region Four,
Attention: Hydraulic Engineer Division.

Attached please find a copy of a letter from Engineer Stewart of the State Water Commission relative to Application No. A-2511, Bright Angel Creek.

Please note that he asks our advice on the disposition of the Application and I am not sure whether or not we should proceed or hold it pending proof of full use of water. That, of course, would be impossible at this time as travel has fallen off considerably, and no doubt will continue to do so during the coming year.

It would seem that it would be better to keep the Application pending for awhile longer as we have until 1945 to prove full use, and the delay will in no way jeopardize our interests.

I shall delay answering his letter until I hear from you.

(Sgd) H. C. Bryant
Superintendent.

660.057

September 30, 1941.

MEMORANDUM for the Regional Director,
Region Four Headquarters.

Attention: Hydraulic Engineer Dunn.

Reference is made to your memorandum of September 18 relative to water use at Phantom Ranch.

On September 23 we sent you a copy of our letter to Mr. Wanslee, together with your copy of the "Notice of Beginning of Construction."

We have just received from Fred Harvey Transportation Department the following information requested in your memorandum of September 18: "------peak travel at Phantom Ranch subsequent to May 15, 1937, as follows:

May 15, 1940 - 32 mules
*April 6, 1941 - 48 guests and employees.
**April 6, 1941 - 34 hikers.-------"

*Overnight
**Part of day

[illegible] C. M[illegible]

Acting Superintendent.

CMC/ab

FILE COPY

361

Fred Harvey

GENERAL OFFICE
UNION STATION
KANSAS CITY, MO.

Fred Harvey Transportation Department
Grand Canyon National Park
Arizona

Sept. 27, 1941.

Mr. C. M. Carrel,
Acting Superintendent,
Grand Canyon National Park,
Arizona.

Dear Mr. Carrel:

As requested in your letter of the 22nd, I am showing below information relative to peak travel at Phantom Ranch subsequent to May 15, 1937, as follows:

May 15, 1940 - 32 mules

Apr. 6, 1941 - 48 guests & employees

Apr. 6, 1941 - 34 hikers.

If this does not give you the information you need, please advise and we shall go into the subject further.

Yours truly,

JES-HGF

J. E. Shirley, Mgr.

06-23-1945: memorandum to regional director from chief regarding request for an extension of time is due

June 23, 1945.

MEMORANDUM for the Regional Director, Region Three.

Our records show that a request for an extension of time is due on December 31, unless we are ready to prove full water use, under Water Right Application A-1765, Deed 21, for the Roaring Springs Water System for the North Rim, Grand Canyon National Park. Due to the war it is assumed that we will need another extension just as much as when the last one was obtained. Please confirm this so that we will be in a position to take action at the proper time.

The records also show that in September 1941 there were certain minor finishing touches to be made to the well and pump installation under amended Water Right Application A-1766, Deed 22, before we could report completion of construction. Under the terms of the permit such construction must be completed by August 22 of this year or we shall have to obtain an extension of time.

Please advise us as to just what has been done since September 1941 and whether that will permit us to report completion of construction.

(SGD.) A. VAN V. DUSEN

AvVD:sh.

Chief, Water Rights Division.

In duplicate.

06-22-1950: memorandum to regional director from chief regarding proof on water right application a-1766, permit a-1094

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON 25, D. C.

In reply refer to:
L54 GRAN

June 22, 1950

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Branch

Subject: Proof on Water Right Application A-1766, Permit A-1094, Phantom Ranch Area, Grand Canyon National Park

Proof or extension of time on the above application is due on August 22. Unless there has been extensive change since my inspection in 1947, I propose to request an extension of time.

So far as I can determine, only about 8% or 10% of the water claimed in the application is actually being used for domestic and stock watering purposes, and about 15% of the claim for irrigation may be used. With flood damage, the irrigable portion of the developed area has been somewhat reduced. It also seemed to me, in 1947, that much of the area between the guide's quarters and the river might never be irrigated. There is also no record to show that the lodge and campground capacity is going to be appreciably increased in the foreseeable future, and therefore the domestic and stock watering demand may never approach the 27,000 gpd covered in the application. I am also forced to estimate the per capita use for these purposes because there are no meters, and the Regional engineering staff may differ with my estimates.

Accordingly, it will be helpful to have a reconsideration of our ultimate water demands, and have them reflected in the master plan, so that I may determine when to make final proof. It will also be helpful if the concessioner can supply bed and meal counts for peak days and the peak week of each season.

(SGD.) A. VAN V. DUNN.
A. van V. Dunn
Chief, Water Resources Branch

In duplicate

AvanVDunn:sh

09-23-1946: memorandum to regional director from nps regarding copies of an extension of time

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
CHICAGO, ILLINOIS

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

September 23, 1946.

MEMORANDUM for the Regional Director, Region Three.

We enclose two copies of an extension of time in which to perfect rights to the use of water at Phantom Ranch in Grand Canyon National Park under Amended Permit No. A-1094. Please insert them at the top in the assemblies of Deed No. 22, in your office and at the Park.

To perfect the right, it is necessary to show full beneficial use. Please send us the record of attendance at the Ranch, by days, for the peak week of the past summer, together with the number of Park and concessioner's employees and the number of head of stock in the area at the same time, in order that we may estimate the water use.

(SGD) P. P. PATRAW

Acting Director.

AvVD:sh.

Enclosure 428.
In duplicate.
cc: Mr. Dunn.



September 18, 1941.

MEMORANDUM for Superintendent Bryant,
Grand Canyon National Park:

Reference is made to Acting Superintendent Davis' memorandum of September 12, 1941, with regard to the dug well and water use at Phantom Ranch.

We enclose a Notice of Beginning of Construction in five copies to be signed and dated by you. The original should then be forwarded to the State Water Commissioner, and the others to the Director, Regional Director, yourself and to us for record purposes.

As soon as you finish the well and pump unit to your satisfaction, please advise and we will draw up a Notice of Completion of Construction. However, this notice does not have to be submitted until 1945 if you feel that you may wish to make changes meantime.

The reported attendance of April 12, 1941, does not permit us to claim complete application of the water to beneficial use. In fact, these figures are lower than some reported before.

It is not entirely clear from State Water Commissioner Wanslee's letter of August 23 whether we really have until 1946 in which to make full application of the water or whether we should prove such use before. It would be safer for us to prove such use as soon as possible. Hence, will you please ask the operator to check his records for the maximum attendance at any date since May 15, 1937, giving number there over night, number for only part of day, and number of mules and horses, and the dates. The stock watering maximum need not be the same as the date for maximum domestic consumption.

In transmitting the Notice of Beginning of Construction, I should refer to Mr. Wanslee's letter of August 23, 1941, and

FILE COPY

advise that the report on beneficial use will be made as soon as possible, advising that all use for irrigation has been made for several years but that since the domestic use depends on the whims of the public you are still looking for that elusive day when the records cross the line.

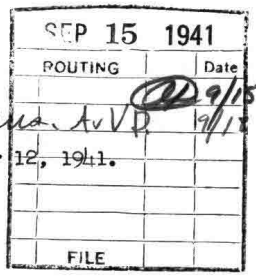
AvVD:SH

Hydraulic Engineer.

Enclosure 2136774.

09-12-1941: memorandum to regional director from acting superintendent regarding water use at phantom ranch in connection wit

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZONA



September 12, 1941.

MEMORANDUM for the Regional Director, Region Four,
Attention: Hydraulic Engineer Dunn.

Reference is made to your memorandum of September 6 relative to water use at Phantom Ranch in connection with Permit A-1094.

Available records received from the Operator indicate that during the past summer the peak attendance at Phantom Ranch occurred on April 12, when there were 47 people who spent the night there. Of these, there were four who are resident employees. All occupied cabins; there are no hotel rooms nor camps. The maximum number of mules at one time staying for a sixteen-hour period was 30 head.

Your assumption that the 17.7 acres are under irrigation is correct. There are no lawns, and the irrigation serves cottonwood trees for the most part, with about two acres of apricot and peach orchards.

Work on the well was started on December 30, 1940, and the two pumps were put in operation on January 20, 1941. There still remains to be done a small amount of work before it can be considered complete. The depth is 20 feet, and it was constructed as per plans.

John M. Davis
Acting Superintendent.

09-08-1941: memorandum to director from nps regarding water rights at phantom ranch

Sv Grand Canyon Nat. Park.

660-057



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA

September 8, 1941.

MEMORANDUM for the Director:

Enclosed you will find a copy of a memorandum dated September 6 from Hydraulic Engineer Dunn with reference to water rights at Phantom Ranch, which is in answer to a memorandum of September 3 from Superintendent Bryant.

Also enclosed is a copy of Amended Application No. A-1766, Permit A-1094 and a copy of the State Water Commissioner's letter of August 23 to Superintendent Bryant with which he returned the approved application.

We feel that a satisfactory solution to the problem of Phantom Ranch amendment of water right has been given by the Water Commissioner. We feel that Arizona has always been very cooperative in the matter of water rights. If there are any physical or practical difficulties to be interposed to the suggestions of the Commissioner and Mr. Dunn, I am sure that Superintendent Bryant will so advise us.

(SGD.) ALBERT L. JOHNSON

Attorney.

Enclosure 2136768.

cc: Regional Director, Region III, with
copies of enclosures.
Supt. Bryant.

09-06-1941: memorandum to superintendent from nps regarding amended application a-1766, permit a-1094

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA



September 6, 1941.

MEMORANDUM for Superintendent Bryant,
Grand Canyon National Park:

Reference is made to your memorandum of September 3, 1941, regarding the water rights for Phantom Ranch.

We have copied what we need from amended Application A-1766, Permit A-1094, and return the original for your files. We assume you will send the necessary voucher for $3.00 to cover the examination fee on the supplemental application and bill the Water Rights Section accordingly.

The Water Commissioner has given a very satisfactory solution to the time limit for the supplemental application if the physical conditions will permit, but I assume that the well is already complete or Fred Harvey would have been unable to serve his guests this summer. At all events, we now have until 1946 in which to prove beneficial use if necessary, but should do so before then. I am inclined to prove use as soon as possible, but to defer reporting on the completion of construction of the well until we are sure we are using more water than is covered under Permit A-1094. A review of the status seems desirable.

Please review our memorandum of June 6, 1941, and see what peak day attendance records you can supply for the past summer, giving the dates. We want the number of people spending the night, those just there for the day; the number of park and operator employees and their families can be included in the over night group, but should be broken down as to those in residences, camps, and hotel rooms. We also want the number of horses and mules there for twenty-four hours, and the number staying only part of the day, including approximately the number of hours they stayed. I assume that the full 17.7 acres have been irrigated, but I should like to know the approximate proportion purely in trees and the type of trees, and the possible acreage of lawn.

00-00-0000: date work was started on the well development

I should also like to know the date work was started on the well development, and if it is complete, the date when water was first diverted by the pump unit. Are both pump units being installed, and was construction exactly according to the plan which we have? What was the final depth of the well?

O. van D. Lunn

Hydraulic Engineer.

Enclosure 2136768.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA
601 Sheldon Building



August 7, 1941

Sent 8-12
P.B. 8-12

MEMORANDUM for Superintendent Bryant,
Grand Canyon National Park.

Reference is made to the pending amendment of water right application A-1766, permit A-1094 to change the Fred Harvey domestic diversion from a surface collection to a well further down stream at Phantom Ranch. It will pay you to review the correspondence beginning with my letter to the State Water Commissioner of April 3, 1941. You should also know that wells are not normally subject to appropriation in Arizona unless full proof is shown that the source of water is a well defined underground channel. We have had one application for Montezuma Castle National Monument rejected despite the fact that the well, like that at Phantom Ranch, could only by luck derive water from any source but the underground flow of the surface stream.

In his letter to me of April 8, the Water Commissioner indicated acceptance of appropriability of the well in question so that matter should not be brought up again by us. He also agreed to the change in point of diversion by merely amending the application; suggesting either that we advise of the desired changes or, "if you prefer", by submission of an amended application. It was not entirely clear what form of "advise" might be submitted in lieu of a rewritten application. We adopted a rider form which we have used a great deal in other states. The Commission Engineer, Edwin T. Stewart, rejected this form by letter to Mr. Kittredge of July 8, and specified that the nature of the data would require that it be submitted on an entirely new application form designated as an amended application A-1766. He also suggested increasing the quantity of water but did not explain the result on priority.

Regional Attorney Taylor, Associate Attorney Johnson, and I have given the matter due consideration and all arrive at the same conclusions:

1. To retain our original priority date of May 15, 1937, at 9:00 A.M.; It is essential that the record of that original filing time appear on the amended application.

2. That any water in excess of that claimed in the original application will only be entitled to the priority date when first recorded with the Commissioner, in this case July 1941 when the map was filed or August 1941 when the typed application will be received.

3. To include any claim for increased quantity of water with an amendment of a prior claim is very likely to result in loss of priority for the original claim.

On this basis we enclose 2 applications for your execution and transmittal to the State Water Commissioner, one to amend the original claim and one to appropriate a supplemental water supply as the water demand increases after the license under application A-1766, permit A-1094 is granted. We also enclose a draft of the type of letter we think you should send with the applications. We assume that the map was retained by the Commissioner in July but you should check your files to see that it was not returned. His maps consist of a tracing of GC-5120A and blue prints. The directo print is your own file copy.

There is a filing fee of $5.00 for the application for the supplemental supply but we are not sure whether the same amount is required for the amendment or not, nor whether you have already made a deposit when Mr. Kittredge submitted the rider and map in July. When adjusted, the charges may be billed to our water rights account.

When the Commissioner returns your applications with the data regarding acceptance and further permit, please forward them temporarily to us in order that we may complete the copies for the Director, Regional Director and ourselves. Also if any further changes are requested, please forward the correspondence for our comments before you take action.

A. vanV. Dunn

A. vanV.Dunn
Hydraulic Engineer

cc: Director, w/ enclosure
Regional Director, Region III, w/ enclosure
Mr. Dunn, w/ enclosure



Engineer
Chief

fc 660-05.7

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA

July 16, 1941.

MEMORANDUM for the Superintendent,
Grand Canyon National Park:

Reference is made to the letter to you from Edwin T. Stewart, Engineer of the State Water Commission of Arizona, dated July 8, and requesting that our amendment of Water Right Application No. 1766, Permit No. A-1094, be covered by a new application instead of the rider we have just submitted. The letter also advises that he was forwarding application blanks for the perfection of such application.

We did not receive the blanks, and therefore assume that you are holding them in the park. May we request that you send them to us in order that we may draw up the application in accordance with Mr. Stewart's suggestion.

There seems to be some difference of opinion by the Commission. You will note that the rider previously submitted was in accordance with the State Water Commissioner's suggestion, and the request to change to the new application form is made by Engineer Stewart. It seems possible that the same reaction will not be taken by the Commissioner, and that he might accept the rider as prepared.

Our interest in adopting the rider form instead of the new application was to be sure that no priority was lost in making the amendment. For this reason, if we have to follow Mr. Stewart's suggestion we will have to be very careful of the form in which the claim is prepared.

Mr. Stewart also suggests that we add the extra quantity of water which we can claim by the pump capacity. For your information, however, all water in excess of that claimed in the original application will definitely acquire a new priority. If we followed Mr. Stewart's suggestion literally, it would add another complication which might result in the loss of our earlier priority for the original amount. For this reason, whatever procedure we finally follow, all water in excess of the original quantity will be covered by a separate new application. The question arises, then, as to whether we are ready to make this new application — that is, dependent entirely on the quantity of water you are now using, and whether you feel that you will be able to use in excess of the existing

right within the five year period which we will be granted for completion of proof.

We are going to defer making either filing until after Regional Attorney Taylor's return to this office about August 1, in order that we may make a careful study of the meaning of the suggestions by Mr. Stewart.

J. Edward Dunn
Hydraulic Engineer.

cc: Director.
Reg. Director, Reg. III.

C O P Y

July 8, 1941

Mr. Frank A. Kitteredge, Superintendent
Grand Canyon National Park
Grand Canyon, Arizona

Re: App. No. A-1766, Per. No. A-1094
Bright Angel Creek
Grand Canyon National Park

Dear Mr. Kitteredge:

We have examined the rider enclosed with your letter of June 13th which you submit for the purpose of amending Permit No. A-1094, granted pursuant to Application No. A-1766.

After comparing the proposed changes with our record we are of theopinion that there should be a complete new application prepared and filed as an amended application. We find it will be difficult, if not impossible, to show the changes on our record, and before such changes are made, if it were possible to make them, the original permit should be changed and submitted to us. In other words, the permit and our record must agree.

Except for the changes you desire to make the amended application will be identical with the original. There appears to be some crowding of type-written matter in the blank spaces of the form which probably can be improved in the preparation of the amended application. For instance, we think that paragraph 3 can be rearranged, but if it cannot be shortened, reference can be made in this paragraph to the rider and the points of diversion described there as has been done with the description of diversion works in paragraph 5.

We believe it desirable that some reference be made in the amended application to the abandoned point of diversion and the reason for abandoning it and that the other reasons for filing the amended application be stated. A statement in about the following form can be made on the rider:

> This amended application is made and filed by the applicant primarily for the purpose of abandoning the point of diversion designated as A in the original application and acquiring the right to divert water from Bright Angel Creek at diversion point D., and for the purpose of increasing the quantity of water appropriated and securing an extension of time in which to complete construction work and to make complete application of the water to beneficial use. (Also refer to any other changes you may make.)

We note your statement that you will eventually require more water from the source of supply covered by this Permit. In this connection would it not be advisable while you are amending the application to increase the amount of the appropriation to your anticipated requirements in the next five or ten years? The Commissioner will allow five years from the date of granting the amended permit in which to make complete application of water, and has the authority to extend this time beyond the five year period. This is about as close as we can approach municipal use in a case of this kind as we do not believe the use is the same as that of a municipality.

In event you do not desire to increase the quantity of water in the amended application and prefer to make proof of appropriation at an early date, and secure a Certificate of Water Right under the present permit, then make a new filing for additional water, we have no objections to this procedure. The map submitted will serve for the new application if there are no changes in points of diversion and places of use.

You will observe that the blank forms we enclose differ somewhat from the form used to prepare the original application in this case. Paragraph 4 now describes the place of using water instead of describing the conduit system.

We enclose a partially completed rough draft of the amended application indicating a few proposed changes we think desirable.

Sincerely yours,

Edwin T. Stewart
Engineer

Encs.

Engineer

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA



June 6, 1941.

MEMORANDUM for Superintendent Kittredge,
Grand Canyon National Park:

Reference is made to your memorandum of April 10, 1941, regarding the Phantom Ranch water system and Application A-1766, Permit A-1094. We also enclose a copy of a letter from State Water Commissioner Wanslee in reply to Mr. Dunn's letter asking for the information given.

We prefer to make the claim for diversion by the "dug well" as an amendment by rider, rather than use a new form, in order not to confuse the priority. We enclose the rider which Mr. Dunn has drawn for your signature and transmittal to the State Water Commissioner. We also enclose tracing and two prints of drawing NP-GC-5120A, being a revision of NP-GC-5120, to show the amendment. Mr. Carrel should sign the tracing and blue-print, and they should then be forwarded with the rider to the Water Commissioner. The extra rider and directo print are for your own records.

There was evidently a misunderstanding of one of Mr. Dunn's needs, as we have not received a print of the topographic map of the area between the well and reservoir. This was wanted to permit the preparation of a profile of the pipe line. However, since the profile does not affect the pipe capacity for pumping, we suggest that the map be filed without that profile. If it is returned for the addition, please return it to us with the data for making the profile.

Mr. Dunn offers the following analysis of 1940 water use at the area from your answers to his questions of January 3, 1941:

Item

1. Irrigation of 17.7 acres at 5 AF/A/Annum per application and permit = 88.5 AF/Annum = 183 days at flow of 0.269 s.f.
This is probably ready for proof.

Item

2. Stock watering.

50 head of horses and mules @ 12 gph per day =	600 gpd
250 head of horses and mules @ 12 gph per day =	3000 gpd
Permit for stock watering=	2000 gpd

Apparently stock watering use is ready for proof, but we should be able to state some date or week in which 250 head were at the area for at least 67% of each day, or at least 166 head were there a full day.

3. Domestic use.

50 people @ 110 gpc in homes =	5500 gpd
100 people @ 110 gpc in homes =	11,000 gpd
Normal hotel with 100 occupants in rooms @ 225 gpc =	22,500 gpd
100 people @ 35 gpc in camp =	3,500 gpd
Permit for domestic use =	25,000 gpd.

The proof under domestic use seems questionable without more knowledge of the per capita demand. Note that the swimming pool is not domestic use in the true sense and not included.

The requested amendment restores construction to an incomplete status. Although the system was complete several years ago, our records do not show whether it was so reported or not. We are assuming, therefore, that we must get the amendment in by June 28, 1941, and request one or two years extension of time in which to complete construction and another year in which to apply to beneficial use. This will give you time in which to analyze domestic use a little more thoroughly.

Assuming that full use has been made of 25,000 gallons of water for domestic purposes by the end of this summer, there will be no further rights to cover the increase of future travel years except the storage. The 40,000 gallons would permit one week of use at about 30,700 gallons per day within the terms of the present right. There could, of course, be several of these peak weeks scattered over the season to permit refilling the reservoir between. The question, therefore, becomes one of when to apply for more water rights as well as when we can perfect the present right for license.

Your attention is also called to the National Park Service pipe line on the map. It was used by a CCC Camp in 1937, but the plans at that time were to remove the CCC Camp. We wonder, therefore, whether this pipe is now in existence. If it is not, our enclosed

amendment should be returned for further correction. If it is in existence, we wonder whether it is satisfactory, or whether the amendment should be revised to provide for change in point of diversion similar to that now shown for the Fred Harvey line.

Before you send application for amendment to the Water Commissioner, please consider all of the preceding points. Return the data for corrections which may seem desirable as a result, but please remember the possible time element. (Haste is not so great if construction has already been reported as complete for the old system, so that should also be verified from your records.)

If the present application seems to fit the conditions, we suggest that you send it to the Commissioner with a letter similar to the draft enclosed, sending us a copy as finally typed. (We leave it in draft form because we do not have your stationery, and do not know what minor changes you may wish to make.)

As we see it at the moment, we must be sure that the right is not allowed to lapse at the possible June 28 deadline this year. The operator will also feel better if authority is granted for the new well at once. Otherwise, we have a year more to consider full use. Mr. Dunn is planning to visit Zion and Grand Canyon at the end of the summer, and will give more study to the use at that time. Meantime, however, we wish to stress the need for records of quantity and date.

Associate Attorney.

Enclosure 2136722.

cc: Director.)
Reg. Director, Reg. III.)
) with copy of Mr. Wanslee's letter of April 8, 1941.

Fred Harvey Grand Canyon file

Rider

Amendment of

Application A-1766, Permit A-1094
Bright Angel Creek
Grand Canyon National Park.

3. A. Diversion A for Fred Harvey Line, at point whence SW corner Section 18, T31N, R3E, G & SR B & M, bears "South 17,457 ft. and West 8,512 ft." will be abandoned.

B&C. There are no changes in Diversions B for the NPS Line and Diversion C for the West Irrigation Ditch.

D. Diversion D is here claimed in lieu of Diversion A. Said diversion to be at a well on the east side of Bright Angel Creek 15,683 ft. North and 7401 ft. East of said SW corner of Section 18, T31N, R3E, G&SR B&M.

4. A. The Fred Harvey Pipe Line, consisting of 0.47 miles in length, terminating at 40,000 gallon distribution reservoir, will be removed.

B,C,&D. There are no changes in NPS pipe line, or East or West Irrigation Ditches.

E. The new Fred Harvey pipe line from Diversion D will be 175 feet in length, terminating at said 40,000 gallon reservoir previously used with Diversion A.

5(a).A. The Fred Harvey gravity diversion will be abandoned.

B,C&D. There are no changes.

5(b) There are no changes applicable to the NPS pipe line and East and West Irrigation Ditches.

5(c) The well at new Diversion D will be 6 feet in diameter and approximately 12 feet in depth, lined with locally cast masonry casing. The well is designed and located to use the natural gravels along Bright Angel Creek as a filter and derive its water supply from said stream. The water will be diverted from the well by 2 self priming pumps with combined capacity of 30 gallons per minute; direct connected to 2 electric motors, each rated at 0.5 horse power. The pump lift is 42 feet. The pipe is of galvanized iron, 2 inches in diameter.

6(a). No change.

6(b). The NPS pipe line has not been changed.
The Fred Harvey pipe line will be 2" in diameter, 175 feet in length, of galvanized iron pipe with pump lift of 42 feet.

7-21. There are no changes in distribution and use.

Drawing NP-GC-5120A is submitted herewith, to supersede NP-GC-5120 which was filed with original application.

Diversion A is to be abandoned because it was found impractical to maintain and operate it under prevalent flood conditions. The new diversion D is designed to divert the same water after filtering out debris and other foreign matter which previously clogged the pipe and made that water unpotable, and to divert it at a point where the diversion works will be less subject to damage from floods.

The United States of America

By_____
Frank A. Kittredge,
Supt., Grand Canyon National Park.

06-05-1941: memorandum to superintendent from associate attorney regarding purport of the recently enacted amendment to eh a

601 Sheldon Building

June 5, 1941

MEMORANDUM for Superintendent Kittridge,
Grand Canyon National Park:

In response to your inquiry of May 27 concerning the purport of the recently enacted amendment to the Arizona Water Code known as Senate Bill No. 55, will state that you are correct in being of the opinion that it does not affect our present filings. It accomplishes the purpose for which we were striving in 1936 and 1937 under Superintendent Tillotson. In other words, we can now file for water rights for fish and wildlife purposes and use some of the designated natural reservoirs mentioned in our preliminary water rights survey of Grand Canyon.

I believe the Water Commissioner and the Water Rights Section will both be gratified to make use of the new law to enable us to make further water right filings for the protection of wildlife there.

[illegible]

Associate Attorney

cc: Regional Director, Region Three
Director

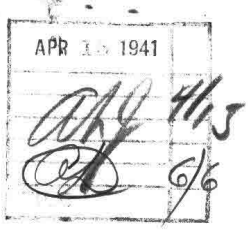
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FILE COPY

04-10-1941: memorandum to regional attorney taylor from nps regarding water rights for the proposed dug well at phantom ranch

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZONA

April 10, 1941.



Memorandum for Regional Attorney Taylor,
Region IV, San Francisco, California,
Attention: Mr. A. Vanve Dunn:-

Reference is made to Mr. Dunn's memorandum for the Regional Director, Region III, under date of April 3, 1941, relative to the water rights for the proposed dug well at Phantom Ranch.

Regarding the new point of diversion for Application No. A-1766, Permit A-1094, as referred to in the third paragraph of this memorandum, Please be advised that the only point of diversion involved in the change is the one for domestic water which had its intake about a mile above Phantom Ranch in Bright Angel Creek. This diversion point has been abandoned and is not now in use.

Regarding the elevations of the new pipe line which extends from the pumps over the dug well to the reservoir there is a difference in elevation between the intake of the well and the intake of the reservoir of some 42 feet and is approximately 140 feet in length. The pipe line follows the natural contour of the ground, in which it lies and is two inches in diameter. The elevation of the top of the well is 2546 feet and the elevation of the intake at the reservoir is 2588 feet.

A blueprint of the original tracing of the project has been sent to you and it is believed you will have no difficulty in platting the pipe line in relation to the well and reservoir.

We are taking the liberty of answering these questions contained in Mr. Dunn's memorandum for the Regional Three Director, feeling that we are in a better position to furnish this information than is he.

With reference to the memorandum to Superintendent Kittredge of January 3, it is believed that Mr. Dunn is correct in his assumption that the supply as now installed is the underground flow of Bright Angel Creek, inasmuch as there would be no possibility of any other source of supply. From all indications developed by work in this area there does not seem to be any doubt but what the rock cliffs extend as a solid mass from side to side at a reasonably shallow depth below the ground level and that a 12-foot depth well would be fed from percolating waters of the main stream.

04-10-1941: memorandum to regional attorney taylor from nps regarding water rights for the proposed dug well at phantom ranch,

Question number one relative to the 17.7 acres to be irrigated is answered in the affirmative; number two, 50; number three, 250; number four, 50 population and 100 per cent spending the night; number five 100; number six, no meter records.

Today Associate Attorney Johnson called at this office and was given this information and also was shown the Phantom Ranch map which showed the old point of diversion and pipe line so it is believed that he has it well in mind as to the conditions at Phanton Ranch.

It is hoped that the information contained herein will be of sufficient help to perfect any papers to be prepared for the State Water Commission.

F. A. KITTREDGE,
Superintendent.

cc: Regional III Director.

4/7/41 Mr. Canel + Supt, Grand Canyon Nat Park



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA

April 3, 1941.

Memorandum for the Regional Director, Region III:

Reference is made to the memorandum from Superintendent Kittredge to you of March 25, 1941, regarding water rights for the proposed "Dug Well" at Phantom Ranch in Grand Canyon.

From Mr. Kittredge's second paragraph it seems that he may not have received my reply of January 3, 1941, to his memorandum of December 31, 1940. I am sending him another copy today, as it lists much information we should have.

By paragraph 4 of the last memorandum, the "old diversion" has been abandoned. Application No. A-1766, Permit A-1094, is for diversion from three points of diversion. Before we can file an application for change in point, we must know whether this statement meant all three old diversions were abandoned or only one; and if the latter, which one.

Finally, before we can complete the map and application for the change we must have a profile of the pipe line. We do not have a map of the area with contours, as the original applications were prepared from the original tracings of the topographic map before they were sent to your office. The simplest solution will be for you to send us a print of the sheet covering that area of the ranch involved in the water development. I wish to be able to show both pipe profile and elevations relative to water level in the stream. The latter is to be used to show what relation well water has to underground stream flow.

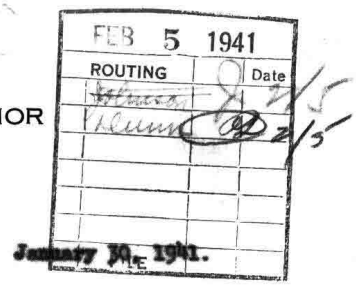
(SGD.) A. VAN V. DUNN
Hydraulic Engineer.

cc: Director.
Supt., Grand Canyon Nat. Park, with
copy of Mr. Dunn's memo of Jan. 3,1941.

01-30-1941: memorandum to regional director from nps regarding dug well and pump house for a new water supply at phantom ra

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE



January 30, 1941.

MEMORANDUM for the Regional Director, Region III.

Reference is made to the job for a dug well and pump house for a new water supply at Phantom Ranch in Grand Canyon National Park, Operator's Drawing NP-GC-5715, as revised December 26, 1940.

Although this Branch has cleared the proposed job, the following considerations are called to your attention:

Because of the location and the shallowness of the well we believe that it will actually constitute a diversion of the water of Bright Angel Creek and cannot be considered a well tapping ground water in the ordinary sense of that term. Since it will constitute a diversion, Mr. Barton has pointed out that it will amount to an appropriation as defined by the law of Arizona--Maricopa County, etc., v. Southwest Cotton Company, 4 Pac. (2d) 369. Since we already have a permit covering the appropriation for domestic, irrigation, and stock watering purposes at Phantom Ranch (Permit No. A-1094, granted June 29, 1937, Application No. A-1766, filed May 15, 1937), the existing filing should be amended or supplemented so as to cover the new diversion. For this purpose a copy of the plan should be sent to the office of the Regional Attorney in San Francisco.

Certain additional information that will be required before the documents can be prepared should be furnished to the Regional Attorney. Reference is made to the map which accompanied the application filed May 15, 1937 (GC-1520), on which the new diversion point should be located by a tie to the section corner used on that map if no more convenient corner has been established.

Further information should be furnished regarding the changes, if any, which are to be made in the present distribution system; also, whether the present diversions are to be continued or abandoned, and whether the amount of water diverted and used will be increased. If there will be an increase, the purpose for which the increased amount will be used should be given.

01-30-1941: memorandum to regional director from nps regarding dug well and pump house for a new water supply at phantom ra

Mr. Barton has also pointed out that there is little possibility of difficulty arising in the matter of securing the additional water right and, therefore, it has not been considered necessary to secure this information before passing the proposed job.

(SGD) O. G. Taylor
Chief of Engineering.

cc - Mr. Barton
Regional Director, Region IV
Attn. Regional Attorney

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR
SAN FRANCISCO, CALIFORNIA

601 Sheldon Building
January 3, 1941

Memorandum for Superintendent Kittredge,
Grand Canyon National Park:

Reference is made to your letter to Associate Attorney Johnson of December 31, 1940, regarding a Dug Well and Pump House for New Water Supply, Phantom Ranch, together with drawing NP-GC-8715 (Company No. CECL No. 89-22386).

If the water from this well can be proved to be the underground flow of Bright Angel Creek, it is subject to appropriation. If there is any chance that the water is from another stratum below the creek, or from side hill percolation, it is not subject to appropriation.

With a depth of only 12 feet I believe it is subject to appropriation under the first case. Proof would be fairly good if you are able to certify that the rock cliffs which bound the canyon also continue as a solid mass from side to side at a reasonably shallow depth below the ground level. From past experience in the case of Montezuma Castle, I know, however, that the State Water Commissioner is very likely to reject an application with that much proof if there is also any chance that the water might percolate through faults in the canyon wall or floor.

Mr. Johnson is away until next week, but he could not render an opinion on the status of the water right any better than I until we had a fairly good idea of the geological conditions just described. Hence it would help if Mr. Carrel and your geologists would give a brief outline of their opinion on the matter and their feeling of assurance. If they feel any doubt we can make a test filing as at Montezuma, and have the letter of rejection on file for priority purposes if the water code is broadened at a later date.

Another question is whether the well is to supersede an existing surface diversion or augment the supply therefrom; and if superseding, which diversion is to be abandoned. If an old point of diversion is to be abandoned, the possible water right application becomes an amendment of an existing right and not a new claim. In this case, I think the Commissioner would accept it with less proof of underground source.

If the well is a supplemental supply we have to remember that we now have Permit No. A-1094 for the appropriation of water and that the full use of the following quantities must be made by June 28, 1942:

25,000 gpd for domestic purpose
2,000 gpd for stock watering (will require between 150 and 200 head at corral)
152,000 gpd for irrigation (converting 5 AF/A/annum on 17.7 acres during 190 day season

179,000 gpd, or 0.277 second feet

Our first problem is to prove full beneficial use of the claim under Permit A-1094, as it has a 1937 priority. The supplemental supply should then be for the total additional needs anticipated five years hence. Proof of use under both can be deferred by requesting extension of time, of course. The questions are how much water is used from existing diversions, how much is to be pumped from well, and whether you wish to leave all of the original right at its present diversions or transfer part to the well as a more reliable supply.

Incidentally, proof under Permit A-1094 will probably have to be made during this year, as there will probably be too little attendance before June 28, 1942. You may have proof from the past summer's records. For such an analysis, I should like to have the following data for last summer:

1. Assurance that 17.7 acres were irrigated. Ok.
2. Maximum number of horses and mules dependent on the water supply for one day.. 50
3. Total horses and mules so dependent during peak week. 250
4. Maximum population for any one day, and percent of that population spending the night. 0 and 100%
5. Total average population peak week divided into day visitors and overnight residents. 100
6. Any meter records you have of water use. None

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZ.

December 23, 1937.

Memorandum for the Files:

In connection with the attached Application Number A-1766, Permit Number A-1094, covering the appropriation of water from Bright Angel Creek, for domestic irrigation and stock watering, used at Phantom Ranch, it will be noted that the permit provides complete application of the water to the proposed use shall be made on or before June 28, 1942.

Although construction work was actually completed at the time application for a permit was made, it was thought that there might possibly be some additions to or alterations in the existing system, in the way of changing the size in the intake pipe, increasing storage capacity, bringing additional areas under irrigation, etc. For this reason, the permit was made to read that complete application of the water to the proposed use shall be made on or before June 28, 1942.

No further action on this permit is required at the present time. However, if and when such additional construction work is started, there must be filed with the State Water Commission, notice of beginning of additional construction. Furthermore, on or about June 28, 1942, there must be filed with the State Water Commission, formal Notice of Proof of Appropriation of Water. In that connection, reference is made to Chief Engineer Blanchard's letter of August 16, 1937, in which he states that water from Bright Angel Creek was first used at Phantom Ranch for domestic purposes, irrigation and stock watering in February, 1921. Upon filing of such Notice of Proof of Appropriation of Water, and payment of the required fee ($3.50 at present) a certificate of water right will be issued by the State Water Commission.

M. R. Tillotson,
Superintendent.

CC: ~~Mr. Blanchard,~~
~~Mr. Shipley~~

07-19-1937: letter to nps from superintendent regarding filing of water rights for use of the waters form bright angel creek

660-05

July 19, 1937.

Mr. Joseph M. Taylor, Attorney at Law,
U. S. Department of the Interior,
110 Sutter Street,
San Francisco, Calif.

Dear Mr. Taylor:

Reference is made to your letter of June 21st relative to filing of water rights for use of the waters from Bright Angel Creek at Phantom Ranch.

I have reviewed the data submitted, and while there is some difference of opinion relative to the details between your office and Mr. Blanchards, I feel that the immediate need is to prepare something with sufficient information which will be acceptable to Mr. Stewart.

The applications seem in line with the apparent requirements, except for the difference in opinion as regards the use of water at Phantom for the purpose of generating current for pumping water to Indian Gardens. This, I believe, is a detail that can be ironed out later, if and when a design is made.

Your suggestion as to the use of the township plat type of map, I should think, would be entirely satisfactory. I would suggest that you limit all information to be shown on the plat to a minimum of the requirements, for, as you know, we have no assurance of the project ever going through, and it is only to protect our future interests that the filing is being made.

I have retained the black line prints and drafts of the application which I will hold until your final draft and map are received.

Very Sincerely Yours,

M. R. Tillotson,
Superintendent,

By: J. V. Lloyd,
Assistant Superintendent.

CMC/he.

WORK COPY

07-14-1937: letter to chief engineer from nps regarding secure filings on all water used, or proposed for use within the park in orde

660-07

July 14, 1937.

Mr. M. C. Blanchard, Chief Engineer,
A. T. & S. F. Railway Coast Lines,
Kerchoff Building,
Los Angeles, Calif.

Dear Mr. Blanchard:

As you know through previous correspondence, we have for some time been endeavoring to secure filings on all water used, or proposed for use within the park in order to legalize our use of the same, and to protect our rights and those of the park operators. In this connection you are advised that filings have been made and permits have been issued by the Arizona State Water Commission, as follows:

1. Application No. A1766 filed May 15, 1937. Permit No. A-1094 issued June 29, 1937, covering the use of 25,000 gallons per day for domestic purposes at Phantom Ranch; five acre feet per annum for irrigation and 2,000 gallons per day for stock watering there, all of the water involved being taken, of course, from Bright Angel Creek. The application and the examination fee was $3.00 and the fee for recording the permit was $12.16, a total of $15.16 not including legal, engineering, administrative, clerical and incidental costs.

2. Application No. A-1755 filed December 8, 1936. Permit No. A-1091 issued June 29, 1937, covering the use of 300,000 gallons per day out of the springs at Indian Gardens in connection with the municipal and domestic water supply for the South Rim. Application and examination fee $3.00 and recording fee $5.00.

In both of these cases all legal, engineering and other work in connection with the filings has been done by the National Park Service, and all fees and other costs have been met by the Government. Ownership of water rights is, of course, vested in the Government, and permits are issued to "The United States of America, by M. R. Tillotson, Superintendent of Grand Canyon National Park".

In connection with further papers which I must file with the State Water Commissioner concerning these permits, it is necessary to have certain information which is, I believe, best obtainable from your records. Please therefore, advise me as to the following:

FILE COPY

07-14-1937: letter to chief engineer from nps regarding secure filings on all water used, or proposed for use within the park in orde

1. Date on which water from Bright Angel Creek was first used at Phantom Ranch for domestic purposes, irrigation and stock watering.

2. Date construction work was started on the Indian Gardens Water Supply System.

3. Date completed.

4. Date water from the Indian Garden supply was first turned into the South Rim domestic mains and tanks.

5. Difference in elevation between the suction intake of the Indian Garden's pumps and discharge at storage tanks on the South Rim.

6. Discharge lift of the centrifugal pumps used at Indian Gardens.

An early reply giving this required data will be appreciated so that I may complete my filings. Incidentally, another $3.50 fee will be required at the time I file Proof of Appropriation of Water in connection with the Indian Garden Supply System.

Although considerable work has been done in connection with other proposed water filings, the actual applications have not as yet been accepted and permits issued by the State Water Commission. Among these others are the proposed hydro electric plant for Phantom Ranch and the proposed municipal supply line from Bright Angel Creek to supplement the Indian Garden supply. You will, of course, be advised as to final action taken in connection with those cases.

Very Sincerely Yours,

M. R. Tillotson,
Superintendent.

MRT/he.
CC: Mr. Shirley,
Mr. Nelson,
Mr. Taylor.

06-21-1937: letter to grca superintendent from regarding enclosed drawings gc-5113 and gc-5135 showing the proposed hydroele

June 21, 1937.

Mr. M. R. Tillotson,
Superintendent,
Grand Canyon National Park,
Grand Canyon, Arizona.

Dear Mr. Tillotson:

We enclose one print each of drawings Nos. GC-5113 and GC-5135, showing the proposed hydroelectric plant for Phantom Ranch and auxiliary municipal supply for the South Rim, diverting from Bright Angel Creek, together with a draft of the application to accompany each filing. We also enclose a copy of the latest data from Mr. Blanchard to you regarding water needs in these two systems.

The application forms seem entirely too detailed for proposed systems -- at least, as far as they pertain to our particular problems where we do not have an actual design at this time. At the same time, the preliminary maps which the State requires are not as detailed as that which I am submitting to you.

To conform to the application, I have prepared a very rough design and have endeavored to appropriate all of the remaining water of Bright Angel Creek over and above previous applications. I have suggested appropriating the full one second foot for municipal use at the South Rim, because this is more easily reduced later than increased, and because it is the quantity of water which will not return to the stream for use by others farther down the Colorado River. This is an increase of 30% over what the Santa Fe requested.

I have included an 8-inch pipe throughout to the South Rim, because the suggested 6-inch of the Santa Fe would give rather a high velocity for a pump line, especially if a full second foot is delivered in one stage from Indian Gardens to the top. I have also suggested that this line be independent of the existing Indian Gardens system. Actually, by the time construction is started, it may be desirable to replace the existing system from Indian Gardens to the Rim to handle the full quantity in one pipe line of larger size, and with a single battery of pumps and motors. I believe this detail can be easily corrected by incorporating such changes in the final plan at the time of appropriation.

FILE COPY

FILE COPY

06-21-1937: letter to grca superintendent from regarding enclosed drawings gc-5113 and gc-5135 showing the proposed hydroele

With respect to the hydroelectric plant, I have suggested appropriating 20 second feet and developing 180 horse power. This necessitates a somewhat larger penstock, and, as Mr. Blanchard suggested, in all probability it will be cheaper actually not to attempt such a big power unit when final construction is made. At the same time, I find that I can justify the full quantity in this preliminary stage, and think it well to attempt it and plan on possibly making a change in the final appropriation when the construction is started.

The main problem in both applications is the date at which construction is to begin, which is limited ordinarily to one year, and to be completed within five years. Probably you will not start construction until nearly the end of the five-year period, but it occurs to me that they will probably accept preliminary surveys as a feature of construction within the first year to serve as the initial step. The construction itself might then be postponed until the end of the five-year period, and an extension of time requested for completion at that time.

Both of these applications are highly hypothetical at the present time, and we should all bear in mind that when actual designs and construction are undertaken the applications should be amended in accordance with the changes. For this reason, both the Santa Fe and Mr. Kittredge's office should be advised of these preliminary plans, in order that whichever makes the final construction will take care of the matter of amendments.

The present data is being submitted in the form of a rough draft, and not for final filing with the State. It is anticipated that you may wish to make certain changes and corrections before it is submitted to Mr. Stewart. It occurs to me, too, that we may prefer to use the township plat type of maps for the actual filing and retain the tracings as submitted to you at this time merely for reference at the time of working up a final design.

Sincerely yours,

Joseph E. Taylor,
Attorney.

AvVD:SH

By

A. van V. Dunn,
Associate Engineer.

CC: Mr. Kittredge.

04-12-1937: letter to nps superintendent from atch?n topeka and santa fe railway company regarding consideration of the proposa

The Atch[illegible]n, Topeka and Santa Fe [illegible]lway Company

COAST LINES

M. C. BLANCHARD, Chief Engineer
F. D. KINNIE, District Engineer

ENGINEERING DEPARTMENT

H. L. GILMAN, Architect

REC'D APR 13 1937

Los Angeles, Cal., April 12, 1937.

2435

Copies mailed Supt. Tillotson and A.A Kittredge 6/21/37.

Mr.M.R.Tillotson,Superintendent,
National Park Service,
Grand Canyon, Arizona.

Dear Sir:

Further in regard to your letter of March 8th and my reply of March 10th regarding a hydro-electric plant at Bright Angel Creek:

Before discussing the hydro-electric plant, the proposal for pumping water from Bright Angel Creek to Indian Gardens will be considered.

We have no plans now for pumping anything like four second feet, which would be 1800 gallons per minute.

A supply of 300 gallons per minute would be ample for a long time as it would only be used to supplement the Indian Gardens supply.

However, itwas thought that the 4 second feet included domestic and irrigating use at Phantom Ranch, which might not be much out of line.

Our tentative plan for this line to Indian Gardens is to start with an 8" pipe line at some suitable diversion point about one fourth of a mile north of Phantom Ranch then continue as a gravity 8" line through the ranch, crossing Bright Angel Creek, then crossing the Colorado at the present wood hauling cableway location with a cable span, then parallel the river trail as you suggest up to a point on Pipe Creek about half a mile from the river where the pipe would discharge into a reservoir after filtering to remove sediment which would be picked up in Bright Angel Creek after a storm. A high pressure pumping plant would be constructed close to this reservoir and a 6" pipe line built from there to connect with the present 6" line at the Lower Indian Gardens. With a 1500 ft head about 150 H.P. would be required to handle 300 gallons.

All the studies we have made for the last twenty years indicate that the least expensive way to furnish electricity for this plant would be to transmit it from the south rim powerhouse by a cable similar to the one build to Indian Gardens, or by an overhead transmission line, if the Park Service would permit this.

This would be true for any large amount of electricity needed at Phantom Ranch if a pumping plant were built there but is even more so for a plant on the south side of the river as outlined above.

The need for a hydro-electric plant at Phantom Ranch simmers down then to local needs for electricity.

We had planned on a 30 K.W.plant using the same intake as for the irrigation system though adding a sand trap and screen, then constructing a 30" redwood stave pipe line 1200 ft long to a point near the corral where a generator house with a 48 H.P. water turbine belted to a 30 K.W.direct current generator would be located. The present Kohler units of 7 H.P. combined capacity would be left in as a standby and would be interconnected with the hydro-electric plant to assist in carrying peak loads.

It is believed that the construction of such a plant, though possibly located further upstream to get away from bad flood conditions, would be justified by the saving to be made in operating cost compared with that of a 30 K.W.gasoline driven electric plant. To operate the 30 K.W.hydro-electric plant would require 15 second feet of the 20 second feet total stream flow.

Answering more especially Mr Dunn's four questions:

1. Choice in the matter of hydro schemes

Limit application to a hydro-electric plant for Phantom Ranch only. It would be desirable to include the entire 20 second feet which would produce 40 K.W. with the same head. If the plant were built further north where the grade is lighter, a pipe line longer than 1200 feet would be required.

2. High line water supply route

Need for this would be eliminated in our plan using the gravity line across the river.

3. Justification for 20 second feet hydro plant

Not needed for pumping to Indian Gardens, but is needed for a 40 K.W. plant to supply Phantom Ranch with electricity for cooking, lighting, refrigeration, fans, etc.

4. Uses for 4 second feet to Indian Gardens

Need only figure on 300 g.p.m. or 2/3 second foot. The other 3-1/3 second feet was for irrigation and domestic use at Phantom Ranch.

#3

I am enclosing both the print you sent me and a print from a tracing I have prepared, Drawing No.181-21227, showing the railroad's plan for water supply for Indian Gardens from Bright Angel Creek. Copy of the latter drawing is also being sent to Mr Dunn with copy of this letter.

Yours truly,

(Signed) M. C. Blanchard

cc Mr A von V Dunn,
Asst Engr, Nat'l Park Service,
110 Sutter Street, San Francisco

Mr B Nelson

Mr O L Gray

GLD-p

03-01-1937: letter to u.s. department of the interior from nps regarding two separate and distinct filings should be made for propos

REC'D MAR 3 1937

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZ.

March 1, 1937.

ans. 3/5/37. J.E.T.

Mr. Joseph E. Taylor,
Attorney at Law,
U. S. Department of the Interior,
110 Sutter Street,
San Francisco, Calif.

Dear Mr. Taylor:

Reference is made to your letter of February 18, to State Water Commissioner, Edwin T. Stewart. While in Mr. Stewart's office on February 24, I discussed with him, in detail, the matter of the proposed filings on water for power purposes and for domestic use in connection with the North Rim development. Mr. Stewart stated, very definitely, that two separate and distinct filings should be made, - one to cover water required for power purposes and another to cover that diverted for domestic use, giving in each application the location of the point of diversion and points of consumption. These descriptions should be by legal subdivisions down to 40-acre tracts. Since the land involved is unsurveyed projection of existing section lines would be necessary in connection with such description.

Although two separate applications must be made for these two uses it will be satisfactory, if it is more convenient for you, to show the entire development, both for power and for domestic use, on one map.

W B

The same would apply to proposed filings in connection with the contemplated hydro-electric plant at Phantom Ranch; that is, one application should cover diversion of water for power development and an entirely separate application should cover diversion of water to be pumped from Bright Angel Creek for domestic use on the South Rim.

Sincerely yours,

M. R. TILLOTSON,
Superintendent.

By J. V. LLOYD,
Assistant Superintendent.

DICTATED BY
M. R. TILLOTSON

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZ.

REC'D MAR 3 1937

March 1, 1937.

Ans 3/5/37 - J.E.T.

Mr. Albert van V. Dunn,
Branch of Lands and Use,
110 Sutter Street,
San Francisco, Calif.

Dear Mr. Dunn:

Reference is made to your letter of February 13 in regard to the filing on waters of Bright Angel Creek at Phantom Ranch and to previous correspondence with Mr. Stewart and with me on the same subject.

While in Phoenix recently, I called on Mr. Stewart and had a lengthy discussion of this entire matter. The difficulties, and the objections on his part to the map and application as filed, may be summed up as follows:

1. There seems to be a very definite requirement on the part of the State Water Commission that filings for irrigation indicate definitely the exact acreage to be irrigated in each individual 40 acre tract as described by legal subdivisions. The tie lines, as shown on your tracing, are sufficient to locate the area in general but not to meet with this requirement. It is, therefore, suggested that the map be corrected by projecting the existing survey in such a manner as to show these theoretical sections and quarter section lines so as to apply to the area under consideration. This should be done even though it is recognized that the land involved probably never will be surveyed.

2. The area irrigated is shown by the light green pencil shading on the reverse of your tracing, however, this is not sufficiently prominent to show up plainly and it does not make an impression on any blue prints, furthermore it does not indicate by 40's the area irrigated. It is requested, therefore, that this irrigated area be shown by a system of cross-hatching. This can be done by means of very fine lines, perhaps in red ink, placed in such a way as to go directly over the lettering or as to leave blanks where lettering occurs.

There are also, apparently, a number of points in which the application, as submitted, does not conform to the requirements of the Commission. These are itemized as follows:

Paragraph 2. It is necessary to state, in connection with irrigation, only the amount of water in acre feet required per acre, per annum for each unit (acre) to be irrigated. That is, you should state the requirement to be five acre feet per annum, per acre and omit reference to the total amount required

for all the acreage involved.

Under the item for stock watering, in the same paragraph, it will be necessary to describe, under 12-c or elsewhere, the legal subdivisions by ten acre tracts, on which stock will be watered.

Paragraph 3. You have given, satisfactorily, the point of diversion as referenced by tie lines, however, it will be necessary, in addition, to describe these locations by legal subdivisions down to a 40-acre tract. If there is not room to describe this in the printed section of the form, it can be taken care of in the rider.

Paragraph 8. We can anticipate future use for not more than five years in advance, consequently this paragraph should show that construction completed to date has cost approximately so much, and that contemplated additional construction, in the next five years, is estimated to cost so much. However, Mr. Stewart said that it would be preferable to make this application stand on the basis of usage already made, without reference to any proposed future work. The application can then be amended to cover any work definitely proposed for the future, or an entire new application can be filed to cover such proposed additional usage. In any event, if the application were made to cover existing and proposed future construction (not to exceed five years) the map would have to show the ditches and other improvements contemplated under this proposed future use.

Paragraph 11. As stated in my comments on the map, it will be necessary to show, by 40's the area irrigated. It is not, however, necessary to show the area to be irrigated by each separate ditch. In giving the legal subdivisions of the irrigated land, you will of course indicate that the land is unsurveyed and that the description given refers to "what probably will be when surveyed" section so and so.

In accordance with Mr. Stewart's instructions, the application and map are being returned for appropriate correction.

Very truly yours,

M. R. Tillotson

M. R. TILLOTSON,
Superintendent.

cc Mr. Joseph E. Taylor

DICTATED BY
M. R. TILLOTSON

02-20-1937: letter to grca superintendent from nps regarding enclosed print of the possible hydro and water diversions from bright

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Branch of Land Acquisition and Regulation
Legal Division
110 Sutter Street
San Francisco, Calif.



February 20, 1937.

Mr. M. R. Tillotson,
Superintendent,
Grand Canyon National Park,
Grand Canyon, Arizona.

Dear Mr. Tillotson:

I am enclosing a print of the possible hydro and water diversions from Bright Angel Creek for Phantom Ranch power and additional South Rim water.

I am somewhat in doubt as to what justifications to use for four second feet for the South Rim water, and also feel that it is going to be very difficult to pump it with the Phantom Ranch hydro power with any head that seems practical.

There is also some question as to just what horse power the Santa Fe anticipated with twenty second feet for this hydro plant. I have tentatively worked out a scheme for the hydro, using slightly under two hundred horse power to supply the Phantom Ranch lights, and also pump half a second foot of water to Indian Gardens. These two quantities seem to work in very nicely with regard to related justifications. To go into four second feet for Indian Gardens would involve far more power than we would have available at Phantom Ranch, and for that reason we see no justification for such a large power unit if it were not to be used for pumping water.

With relation to the power plant, the best scheme on paper seems to be to divert at the existing East Irrigation Ditch site, and carry the water down through Phantom Ranch to a power plant near the outfall of the sewer. This gives the necessary power for pumping a little over half a second foot of water to Indian Gardens, as well as serving the area.

The next alternative is moving the power plant back to a point on Bright Angel Creek just under the barn. This would provide far more than enough power for the Phantom Ranch Area, but insufficient for pumping half a second foot of water to Indian Gardens.

A third alternative, which would provide power for pumping, is to install the power plant on Bright Angel below the barn, as in case two, but to move the diversion up stream to the neighborhood of Station 29. This gives sufficient power, but according to Mr. Webber the site is very poor for any diversion works.

On the routes to Indian Gardens for the water system, the one along the river to the foot of Pipe Creek has the least head, and would require the least power, but would involve a much more expensive pipe line, due to the long high pressure line. The other alternative of climbing up from the bridge to the upper trail, thence over , is decidedly more economical, but from the map seems to require extra head to get over certain saddles or long ridges.

If you could indicate your own ideas and make certain comments based on your greater familiarity with the area, I should like to have as practical a design as possible when I prepare the application. The points I am interested in are:

1. Your choice in the matter of hydro schemes.

2. Whether hillsides would permit dropping down enough on the high line water supply route to keep the whole supply line below the elevation of Indian Gardens.

3. A little more information regarding justifications for twenty second feet in the hydro plant if it does not pump the water to Indian Gardens.

4. Uses contemplated for the four second feet to Indian Gardens.

Sincerely yours,

A. van V. Dunn

A. van V. Dunn,
Associate Engineer.

Encl.

CC: Mr. Kittredge.

02-17-1937: letter to branch of lands and use, california from superintendent regarding transmittal of letter of february 5 to the stat

660-05

February 17, 1937.

FILE COPY

Mr. Albert van V.Dunn,
Branch of Lands and Use,
110 Sutter Street,
San Francisco, Calif.

Dear Mr. Dunn:

Reference is made to Mr. Taylor's letter of February 12 and to yours of February 13.

After executing the papers and map, sent me with Mr. Taylor's letter of January 30, I transmitted them by my letter of February 5 to the State Water Commissioner for filing. Receipt of this filing and comments thereon were made by the commissioner's letter of February 10, copy to you.

With regard to the comments made by Commissioner Stewart in his letter of February 10, and your letter of February 13:

I agree that the entire matter in connection with filing on water at Phantom Ranch is somewhat complicated but with the usage involved it seems that it would be difficult to simplify.

Since the area in question is unsurveyed, any description by legal subdivisions would be, therefore, theoretical and with reference to "what probably will be when surveyed" Section So and So. Under the circumstances, it seems that it is preferable to make the ties to a known established, section corner as you have done rather than to some geographic feature. This, and the matter of showing on the tracing each separate plot of irrigated land, I will discuss with Mr. Stewart in person when I call at his office later in the month.

I had originally intended to be in Phoenix on February 18 in connection with a road letting, however, the date for opening the bids was postponed until the 25th, I will therefore be in Phoenix on that date, instead, and have so notified Mr. Stewart.

Sincerely yours,

H.H.Tillotson,
Superintendent.

HHT/erd
cc The Director

RECEIVED
FEB 1937
GRAND CANYON
NATIONAL PARK

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Branch of Land Acquisition and Regulation
Legal Division
110 Sutter Street
San Francisco, Calif.

February 13, 1937.

Mr. M. R. Tillotson,
Superintendent,
Grand Canyon National Park,
Grand Canyon, Arizona.

Dear Mr. Tillotson:

We have just received a letter of February 10 from Mr. Stewart, State Water Commissioner, in which he brings out certain features of the map on the Bright Angel Creek diversions for Phantom Ranch. We understand that you are to be in Phoenix on the 16th, and will discuss this application with Mr. Stewart at that time. If it is found that additions or corrections are necessary, we hope that you can make the necessary notations and return the map to us for correction, in order that we will know what procedure to take in future cases, and in order that we may have a complete record here.

As Mr. Stewart says, the water right is rather complicated, in that it involves three points of diversion, four systems, and two uses. In addition, the commingling, and therefore unification, of the systems is somewhat difficult. We realized this when we prepared the map, and anticipated it might be a test map for our information in the future.

One point that Mr. Stewart brings up is the question of theoretical section lines and subdivision lines, with their relation to irrigated areas. The sheet of instructions for preparing maps offers the use of local prominent natural features in lieu of section corners for unsurveyed land. It was my original intention to use the junction of Bright Angel Creek and Colorado River, in place of section corners. Such action would not have permitted the use of any section lines at all in this area.

When I found the triangulation used in preparing your topographic map of the area, I changed to ties to the section corner of the South Rim, because I realized that this would permit filing according to section and township in the State records. However, the fact that the land is now unsurveyed, and we are relatively certain it always will remain unsurveyed as land

inside of Grand Canyon National Park, and since it is land which has been definitely withdrawn from entry, the use of even theoretical section lines is quite misleading. However, if Mr. Stewart so desires, it is very easy to draw in such theoretical section lines.

With regard to the irrigated area, I have broken these areas down into parcels on each side of the Bright Angel Creek, and into areas served by each irrigation ditch, as far as possible, using the lower irrigation ditch as the limit for irrigation from the upper in the case of the east side. The total acreage is less than twenty acres, divided roughly into three more or less equal portions, all of which are far less than a forty-acre tract. It did not seem necessary at the time I prepared the map to divide these areas into direct linear portions, since the tracts were already so small for identification. However, I can divide, as suggested, according to theoretical subdivisions, if Mr. Stewart deems it more desirable. An alternative, however, that might be possible, leaving the present divisions as they are, would be to divide the area west of the creek into those served directly by the irrigation ditch, and by the lower end of the pipe line to the corral.

(5)

Mr. Stewart also brings up the question of coloring or hatching the areas under irrigation. In accordance with the sheet of instructions, I shaded or tinted the reverse side of the tracing over the area to be irrigated, with a colored pencil, using green. The color from a pencil naturally makes a very pale shade on the glossy surface of the tracing cloth. I assumed at the time this was intended, and prepared the tracing to go through that way, since there was enough color to be visible. It is very easy to use a colored ink of deeper shade if that seems desirable to Mr. Stewart. It will, however, reduce the clarity of some of the lettering in the area.

(6)

Of course the blue print did not react as well as it might to such a pale shading. However, it did differentiate slightly between the irrigated and unirrigated land. I can touch up the print, too, if it is desirable.

(7)

Another question somewhat indefinite is that of differentiation between the small irrigated parcels, either according to legal subdivision or as I have already done, areas under each ditch on opposite sides of the stream. If Mr. Stewart desires to show them separately by different colors or methods of cross

(8)

hatching, it is possible, but I should like to call attention to the small areas in each case, and the conflict such shading will have with the lettering and other data. In addition, it is going to be rather difficult to show the real division between land irrigated by the east and west ditch on the east side of the stream, because of the laterals between the two ditch systems which permit an interchange of water from one to the other. This condition, probably not too clearly indicated in the typewritten matter, is more a proof of commingling of waters and a justification for not making too small a subdivision of the irrigated land.

I am gratified to have the suggestion of using riders more extensively in describing points of use, etc. When talking with Mrs. Harrison, she pointed out the mechanical difficulties involved in the use of any riders at all, and I have intentionally restricted myself to the minimum in such use, realizing that very often the standard form which I was using in place of the additional riders was not as intelligible as it should be. Apparently Mr. Stewart agrees, and wishes to adjust the mechanical difficulties in some other way in his office. If he wishes to return the application for Bright Angel Creek diversion for such an alteration, we will be glad to comply. We will also bear this in mind in the preparation of future applications.

(9)

Yours very truly,

A. van V. Dunn

A. van V. Dunn,
Associate Engineer.

CC: Supt. Tillotson,
C/o State Water Commissioner,
Phoenix, Arizona.

Mr. E. T. Stewart,
State Water Commissioner,
Phoenix, Arizona.

Memo to Mr. Gillerton:

There were a few draughting errors on the map which I have corrected, and I have signed the affidavit.

The Application covers the present needs for domestic, irrigation and stock, and does not include the proposed use for a hydro plant nor future domestic water supply for the South Rim, so I presume Mr. Taylor will make a subsequent filing for this.

C. M. C.

2/1/37

Blue Prints returned.

01-30-1937: letter to grca superintendent from nps regarding enclosed tracing, blue line prints, and blue prints of bright angel cree

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Branch of Land Acquisition and Regulation
Legal Division
110 Sutter Street
San Francisco, Calif.



January 30, 1937.

Mr. M. R. Tillotson,
Superintendent,
Grand Canyon National Park,
Grand Canyon, Arizona.

Dear Mr. Tillotson:

We enclose tracing, two blue line prints, and two blue prints of drawing GC-5120, being the Bright Angel Creek Diversions for Phantom Ranch, together with the necessary Application to Appropriate Public Waters of the State of Arizona, covering this same Bright Angel Creek Diversion. We believe that your signature on the application is all that is necessary, together with Mr. Carrel's execution of the drawings and the preparation of the voucher. They should then be forwarded to the State Water Commssioner, Mr. E. T. Stewart, at Phoenix, Arizona.

On the drawing we have prepared the certificate for signature by Park Engineer Carrel, and he should execute both the tracing and one blue print to enclose with the application. We have provided for his signature rather than that of Mr. Dunn, because it is more in accordance with the regulations of the State, and this particular map was prepared entirely from the topographic map which was made under Mr. Carrel's supervision last summer. Doubtless adherence to the State requirements in this case will permit greater leeway in some of the more complicated maps which Mr. Dunn is having to compile and sign himself, though in no way connected with the actual surveys. The extra prints over and above the one blue print to accompany the tracing are for your records and use, and additional copies of the blue line print may be had from Mr. Kittredge's Van Dyke copy of the tracing.

O.M.C

In addition, you will wish to submit a voucher covering the fee for filing and examination, amounting to $3.00. As far as we can determine, the additional fees for certificate for actual appropriations are not payable until we have received the acceptance of the application.

We have not attempted to include any appropriation of water for the swimming pool, as you suggest. At the present moment this use is not recognized by the State as beneficial, and it will be easy at a later date to file a separate application for this additional quantity, when beneficial use status has been established in the State. To include this with the present application might cause needless delay, or rejection of the entire application.

I also enclose a letter from Mr. Dunn, in duplicate, together with two prints of drawing GC-5121, regarding variations in the location of the south quarter corner of Section 18, T34N, R3E, being the tie necessary for the North Rim water and hydro systems.

According to Mr. Dunn, this discrepancy is probably due to errors in computation of the traverses extending from the Lodge Area to the reservoir, hoist house, pump house, and power house sites, and he feels that probably the tie from OO of the Union Pacific co-ordinates to the section corner is correct. We feel, however, that this should be checked before using it in the maps to accompany applications for water appropriations, and wonder if you or the Union Pacific would not also like to amend these ties in connection with the leases. There is, however, the other possibility that the ties were all correct, and the locations of these small leased areas, and therefore the points of diversion and use of water, are incorrectly located with relation to the co-ordinate system of the Union Pacific map.

Sincerely yours,

Joseph E. Taylor

Joseph E. Taylor,
Attorney.

Encls.

CC: Director.

01-22-1937: letter to branch of land acquisition and regulation from nps regarding data pertinent to filing for water rights at phanto

REC'D JAN 25 1937

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZ.

January 22, 1937.

Mr. A. van V. Dunn, Associate Engineer,
Branch of Land Acquisition and Regulation,
Legal Division,
110 Sutter Street,
San Francisco, Calif.

Dear Mr. Dunn:

Reference is made to your letter of January 15 relative to data pertinent to filing for water rights at Phantom Ranch.

There are no valves on either the Fred Harvey or Park Service diversion lines. There is no pipenor gate used in the west irrigation ditch other than a six inch metal pipe over the Bright Angel Creek as shown on your print.

About the only suggestion I can make regarding water demand is that we all have apparently forgotten about the swimming pool which requires a constant flow. It is fed from an open ditch off of the main, and the outlet is controlled by a gate valve which is kept cracked to allow circulation. The Landscape Division no doubt can furnish you a print of the pool from which you can obtain necessary data. With this usage possibly you can bring the requirements up to where it should be.

Probably a filing on water for use in the swimming pool would not be accepted under the existing State Code. However, I have sent Mr. Taylor copies of my correspondence with State Senator James E. Babbitt and others in regardto an appropriate amendment to the Code providing for filings for fish culture, game propagation and general recreational use. Perhaps, by the close of the present session of the State Lesiglature, this will be taken care of by law. In any event, it is a matter that should be borne in mind. You understand, of course, that all the water diverted for use in the swimming pool is returned to the original stream.

Since no plans nor data have been prepared on the proposed hydro development, your guess as to its location is as good as mine and I would suggest that you make a tentative location, subject to field changes to conform to final plans. Their penstock diversion will have to be located sufficiently distant upstream to provide head to develop the re-

quired H.P. The power plant will be located at the lower end of the penstock,and, probably, in the near vicinty of Phantom Ranch.

The four second feet supply suggested in my letter of December 29 conforms to request of Mr. Blanchard's office in a telegram dated 12-28-36. No doubt they have in mind additional industrial usage in their garage, hotels, power plant etc.

there seem need to be shown to support application

The draft of the application seems all right and I have no suggested changes to offer.

Very truly yours,

M. R. Tillotson,
Superintendent.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Branch of Land Acquisition and Regulation
Legal Division
110 Sutter Street
San Francisco, Calif.

RECEIVED
JAN 1937
GRAND CANYON
NATIONAL PARK

January 19, 1937.

Mr. M. R. Tillotson,
Superintendent,
Grand Canyon National Park,
Grand Canyon, Arizona.

Dear Mr. Tillotson:

I have started the preparation of the maps for the domestic water and hydroelectric systems for the North Rim, Grand Canyon, using the various Union Pacific maps which you sent me a week or two ago.

There seem to be two rather uncertain points which Mr. Carrel may be able to explain. In the first place, the traverse shown on the long narrow blueprint does not describe either the point of beginning or ending, and does not fit the alignment shown on the other maps very closely. In the absence of any further information, I shall assume that the alignment on the long print was the actual traverse line prior to construction and that the variations between it and the other maps are due to local conditions at the time of construction. However, I should like to know if possible if the point of beginning is actually the same point as that shown on the other maps at the pump house, and whether the other end should reach exactly to the site of the storage reservoirs on the North Rim.

In the second place, the parcels of land leased to the Union Pacific for these developments are very definitely tied to the quarter section corner on the North Rim, but the actual points of diversion, power house and pump house sites, and reservoirs are not actually shown with any survey ties to these parcel boundaries or to the section corner. I can scale them off on the map in such a way that they will be within ten feet of their actual location by computed distances, and shall do so unless you are able to supply this additional information; or you may wish to write again to the Union Pacific for their records, as they doubtless made these ties as a means of completing the maps.

Sincerely yours,

A. van V. Dunn

A. van V. Dunn,
Associate Engineer.

01-15-1937: letter to grca superintendent from nps regarding drawing covering phantom ranch water system for filing with the stat



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Branch of Land Acquisition and Regulation
Legal Division
110 Sutter Street
San Francisco, Calif.

January 15, 1937.

Mr. M. R. Tillotson,
Superintendent,
Grand Canyon National Park,
Grand Canyon, Arizona.

Dear Mr. Tillotson:

I have prepared a drawing covering Phantom Ranch water system for filing with the State Water Commissioner, and enclose a preliminary print of the work sheet as pantographed down from your topographic map. I also enclose a draft of the proposed application.

I should appreciate your comments on the application before we write it up in its final form. In particular, I should like to know for sure that there is no valve at the beginning of the Fred Harvey water main or diversion, and none on the National Park Service line at the diversion in the middle of Bright Angel Creek.

Also there seems to be some question or difference of opinion between Mr. Webber and data in our files as to whether there is a pipe at the diversion for the West Irrigation Ditch, and whether or not there is such a pipe I should like to know the type of gate used, if it does not agree with what I have stated on the application.

The main difficulty I have had was in obtaining justification for any large amount of water. In your preliminary estimates last year you suggested a present use of 1/3 second foot and an ultimate of 1/2 second foot. After planimetering the area which is, or can be irrigated at the present moment, as shown in the shaded area, I obtained only 18.9 acres, which should not have more than about 57 acre feet of water per year according to state practice.

c.m.c.

On the basis of porous soil and dry hot climate, however, I suggest requesting 150 acre feet for the domestic supply. With the population Mr. Carrel gave me while in Grand Canyon I obtained a very small demand, and therefore boosted the population to what I guessed to be about your maximum to date, and then added 67% to that for the ultimate demand. I have also been rather liberal with the stock watering. In all, this amounts to approximately

1/4 second foot as the ultimate supply, and really at present probably does not exceed thirteen or fourteen one-hundredths of a second foot. If you have any suggestions by which we could justify greater quantities, I should appreciate receiving them before we forward the completed map and application for your signatures.

In preparing to file on the water supply for the Phantom Ranch hydro plant, and the additional supply from Bright Angel Creek for the South Rim, I should like to have you mark the approximate site of each diversion and the power house on the enclosed map and return it to me. You of course will receive a print of the finished drawing of this area as soon as the lettering is completed some time next week. In addition, it is my plan to show the pipe line for the South Rim supply as crossing the suspension bridge, following the present trail up pretty well toward Garden Creek and then taking off over the last ridge along the old abandoned trail a little higher up, and tying in to the present reservoir at Indian Gardens.

With regard to the water quantities, your proposed 20 second feet seems quite reasonable for the hydro plant after noting the relatively small head possible in the Phantom Ranch area. However, with regard to the South Rim supply, I wonder if your last letter suggesting 2 or 5 second feet (I do not have the letter with me at this moment) is a decided increase over the 1/2 second foot you suggested while I was in Arizona. Since any quantity of water must be justified by population and other uses, I should like to have a little more definite idea of just what further enlargements other than normal increase in visitors is anticipated at Grand Canyon Village.

This will also acknowledge receipt of the maps and estimates for the Union Pacific systems. I shall return the blue prints as you requested as soon as I have finished with them.

Sincerely yours,

A. van V. Dunn

A. van V. Dunn,
Associate Engineer.

Encls.

01-03-1941: memo regarding a dug well and pump house for new water supply, phantom ranch, together with drawing np-gc-8715

601 Sheldon Building
January 3, 1941

Memorandum for Superintendent Kittredge,
Grand Canyon National Park:

Reference is made to your letter to Associate Attorney Johnson of December 31, 1940, regarding a Dug Well and Pump House for New Water Supply, Phantom Ranch, together with drawing NP-GC-8715 (Company No. CEGL No. 89-22386).

If the water from this well can be proved to be the underground flow of Bright Angel Creek, it is subject to appropriation. If there is any chance that the water is from another stratum below the creek, or from side hill percolation, it is not subject to appropriation.

With a depth of only 12 feet I believe it is subject to appropriation under the first case. Proof would be fairly good if you are able to certify that the rock cliffs which bound the canyon also continue as a solid mass from side to side at a reasonably shallow depth below the ground level. From past experience in the case of Montezuma Castle, I know, however, that the State Water Commissioner is very likely to reject an application with that much proof if there is also any chance that the water might percolate through faults in the canyon wall or floor.

Mr. Johnson is away until next week, but he could not render an opinion on the status of the water right any better than I until we had a fairly good idea of the geological conditions just described. Hence it would help if Mr. Carrel and your geologists would give a brief outline of their opinion on the matter and their feeling of assurance. If they feel any doubt we can make a test filing as at Montezuma, and have the letter of rejection on file for priority purposes if the water code is broadened at a later date.

Another question is whether the well is to supersede an existing surface diversion or augment the supply therefrom; and if superseding, which diversion is to be abandoned. If an old point of diversion is to be abandoned, the possible water right application becomes an amendment of an existing right and not a new claim. In this case, I think the Commissioner would accept it with less proof of underground source.

FILE COPY

If the well is a supplemental supply we have to remember that we now have Permit No. A-1094 for the appropriation of water and that the full use of the following quantities must be made by June 28, 1942:

25,000 gpd for domestic purposes
2,000 gpd for stock watering (will require between 150 and 200 head at corral)
152,000 gpd for irrigation (converting 5 AF/A/annum on 17.7 acres during 190 day season

179,000 gpd, or 0.277 second feet

Our first problem is to prove full beneficial use of the claim under Permit A-1094, as it has a 1937 priority. The supplemental supply should then be for the total additional needs anticipated five years hence. Proof of use under both can be deferred by requesting extension of time, of course. The questions are how much water is used from existing diversions, how much is to be pumped from well, and whether you wish to leave all of the original right at its present diversions or transfer part to the well as a more reliable supply.

Incidentally, proof under Permit A-1094 will probably have to be made during this year, as there will probably be too little attendance before June 28, 1942. You may have proof from the past summer's records. For such an analysis, I should like to have the following data for last summer:

1. Assurance that 17.7 acres were irrigated.
2. Maximum number of horses and mules dependent on the water supply for one day.
3. Total horses and mules so dependent during peak week.
4. Maximum population for any one day, and percent of that population spending the night.
5. Total average population peak week divided into day visitors and overnight residents.
6. Any meter records you have of water use.

If the above data is not available it should be obtained for next summer.

As I have stated, the well at Phantom Ranch has a very similar status to that of the wells at Montezuma Castle National Monument, though I think the source of supply may be a little more easily determined. For your information, I refer you to page 7 and the maps facing page 8 of my "The Water Rights Influence on National Park Service Water Systems" which was mimeographed a little less than a year ago. This gives a rather complete record of the procedure we have followed to date in the case of Montezuma Castle wells.

A. van V. Dunn,
Hydraulic Engineer.

AvVD:SH

cc: Director.
Region III.
Reg. Atty. Taylor.

12-31-1936: letter to branch of land acquisition and regulation from nps regarding delay in getting the attached u.p. maps to you

REC'D JAN 4 1937

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZ.

December 31, 1936.

(Maps not recd with this letter.)

Mr. A. van V. Dunn,
Associate Engineer, N.P.S.,
Branch of Land Acquisition and
Regulation, Legal Division,
110 Sutter Street,
San Francisco, California.

Dear Mr. Dunn:

Reference is made to your letter of December 28. I regret that there has been a little delay in getting the attached U.P. maps to you, owing to Mr. Tillotson's illness this past week, but here they are and the data seems complete so that you should have no difficulty in working up their part of the filing program.

The set of seven sheets you may retain for the Chief Engineer's files as duplicates were sent, but the other maps, after they have served your purpose, I would appreciate your returning to this office for our files.

As we have no available data regarding the cost of installations of the Santa Fe, I would suggest that you write directly to Mr. M. C. Blanchard, Chief Engineer of the Santa Fe at Los Angeles for these figures. There is herewith attached a statement of record cost of the North Rim facilities.

Relative to the tie between the traverse and triangulation in the vicinity of Yavapai. The point is approximately 300 feet east of the Museum, and the Coordinates of this point are tied to Grand Canyon village area - Hopper Base - by traverse of the underground power line from the village to Yavapai - using the identical system of coordinates, from which triangulation was made to points at Phantom.

As outlined in my recent letter to you, I concur in the amount of water to be filed on for Bright Angel Creek.

Sincerely yours,

M. R. Tillotson,
Superintendent.

C. M. Carrel

By C.M.Carrel,
Park Engineer.

UTAH PARKS COMPANY

COST OF POWER AND WATER FACILITIES AT NORTH RIM

FURNISHING OF POWER (Exclusive of water supply requirements)

Penstock intake and dam	$6486.68	
26" Wood stave Penstock 2643' long	32513.11	
Power house including mach. & equip.	65816.79	
	104815.58	
Less 53% assgd. to water supply system	55552.79	
Cost assgd. to Power exclusive of water supply		$ 49,263.79
Electric Transmission Line	20,153.58	
Portion of this item chargeable to water supply is 53% of line from Power house to Pump house.	- 1,571.98	
Cost assgd. to Power exclusive of water supply		18,581.50
Telephone Line	855.77	
Less 53% assgd. to water supply system	- 453.56	
Cost assgd. to Power exclusive of water supply		402.21
Cost of living quarters for Power plant operator		12,371.89
Total Investment for furnishing Power (*)		$ 80,619.49

(*) Excludes portion assgd to Water Supply.

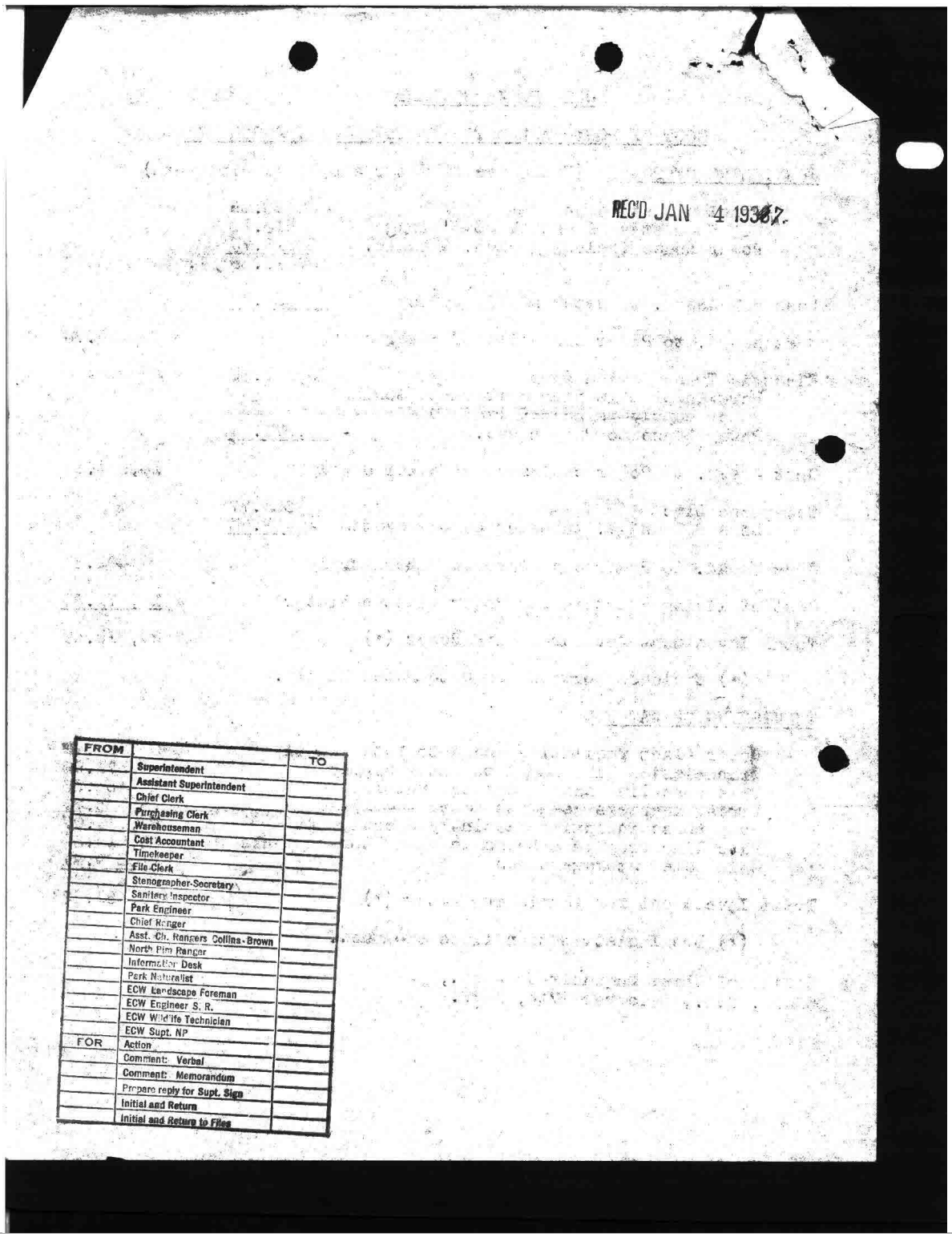
FURNISHING OF WATER

Power plant facilities assgd to Water Supply	$ 55,552.79
Transmission line assgd to Water supply	1,571.98
Telephone line assgd to Water supply	453.56
Living quarters assgd to Water supply	6,668.74
Pump house including machinery & equipment	20,010.07
Pipe line from pump house to Main Storage tanks	45,510.52
Main water storage tanks	11,683.81
Total Investment for furnishing water (*)	$ 153,451.47

(*) Local distribution lines excluded.

Office of Chief Engineer-UPRR Co.,
Omaha, Neb., December 17th, 1936.

01-04-1937: stamp of receipt



12-29-1936: letter to branch of land acquisition from nps regarding proposed filing of water rights in bright angel creek

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZ.

December 29, 1936.

Mr. A. van V. Dunn,
Associate Engineer,
Branch of Land Acquisition
and Regulation, Legal Division,
110 Sutter Street,
San Francisco, California.

Dear Mr. Dunn:

Reference is made to your letter of December 14 relative to proposed filing of water rights in Bright Angel Creek.

I am in accord with the Santa Fe's desire to file on four second feet for a possible supply to the South Rim, and twenty second feet for the proposed hydro development, which water will be returned to the Creek.

Sincerely yours,

M. R. Tillotson,
Superintendent.

C. M. Carrel

By C. M. Carrel,
Park Engineer.

12-28-1936: telegram: flows for south rim supply and hydro electric

ARB-2-36-4MM

CLASS OF SERVICE REQUIRED	SYMBOL	MARK X HERE
Preferred	Px	
Day	Dx	
Night	Nx	

TELEGRAM

Santa Fe

Form 914 Standard

Messages for persons on trains, (except trainmen) must be enclosed in addressed and sealed envelopes.

Time Filed_____M

105 106 WI RB PX LOS ANGS 201PM DEC 28 36

E N
GD CANYON

N--- 35---- FOUR SECOND FEET PLENTY FOR SOUTH RIM SUPPLY BUT SHOULD FILE ON ENTIRE FLOW ABOUT 20 SECOND FEET FOR HYDRO ELECTRIC USE PHANTOM RANCH WATER TO BE RETURNED TO RIVER EXCEPT PORTION USE ON SOUTH RIM OR AT PHANTOM ...A---52..

M C BLANCHARD.

450PM.

Gr Canyon.
~~S W Mons~~
~~Wupatki~~
~~Montezuma Castle~~
~~Tuzigoot~~
~~Verde Valley~~

NATIONAL PARK SERVICE

Branch of Land Acquisition and Regulation
Legal Division

Report
On
Investigation of Water Rights
For Grand Canyon and Southwestern Monuments

Phantom Ranch

By

A. van V. Dunn
Associate Engineer

San Francisco, Calif.,
December 17, 1936.

Introduction

This report constitutes a review of my activities on a trip to Arizona in connection with National Park Service water rights in that State. The trip was made in the company of Associate Attorney Albert L. Johnson, on instructions from Attorney Joseph E. Taylor of the Branch of Land Acquisition and Regulation.

We left San Francisco November 29, and returned December 11. We visited Grand Canyon, Casa Grande, Phoenix, and Los Angeles.

Grand Canyon

At Grand Canyon we found that Superintendent Tillotson was away on leave, but outlined our program to Acting Superintendent Lloyd, and arranged for an interview with Mr. Tillotson in Phoenix. We also discussed the various water systems of the Park with Park Engineer Carrel.

The desirable water rights for the Park are as follows:

1. Indian Gardens supply for South Rim, 300,000 g.p.d., which is the full flow of the source of supply. We were able to file the application on this supply while in Phoenix, and arrange for the map, which will be submitted within thirty days, after incorporating data obtained from the Santa Fe Railway Company in Los Angeles.

2. Union Pacific Hydro-electric Development on Bright Angel Creek for North Rim, 5 second feet.

3. Roaring Spring Supply for North Rim, 30,000 g.p.d. during four summer months.

Only part of the necessary data for filing on these two systems was available in the Park, so Mr. Lloyd wrote to the Union Pacific for the additional information. When this is received, maps and applications will require two to three weeks of office work.

4. Fish Hatchery (proposed) on Roaring Spring, 1/2 second foot.

5. Fifteen Impounding Dams for Wild Life, 225 acre feet, of which twelve dams are now constructed. By specifications of the State Water Code, Wild Life and Fish are not recognized as beneficial use, so that these two items are not now subject to appropriation. However, the Park can lose the water through private filings below its boundary for recognized beneficial use, and the State is anxious to liberalize its code, so it would seem highly desirable to have as much correspondence on the matter with the State as possible. Mr. Tillotson has agreed to write one letter to place his problems on record.

6. Cottonwood Camp Supply, 300 g.p.d., and irrigation of five acres. The maps and application will require a part of a week of office work.

7. Clear Creek (proposed), 100 gallons per week, and irrigation of ten acres. A preliminary application and map were prepared in the field, for use as an illustration with the Water Commission, and can be completed and filed very quickly.

8. Phantom Ranch on Bright Angel Creek, 7000 g.p.d. present use and irrigation of twenty acres. It is also proposed to divert 1/2 second foot to augment the Indian Gardens supply for the South Rim, and the Fred Harvey interests are considering a hydro-electric plant which might require an additional five or six second feet. This combined system may be partially combined with items 2 and 3, and will require approximately a month of office work. The data is now on file in the office of the Chief Engineer, but will require considerable modification for use.

Except for the developments by the Union Pacific, data for filing can now be prepared from data obtained in the interview with Mr. Carrel, or from maps in the office of the Chief Engineer.

Southwestern Monuments

In our interview with Superintendent Pinkley at Casa Grande, we discussed all Southwestern Monuments, irrespective of State boundaries. The following tabulation of Mr. Pinkley's problems is clearly more of adjustments and legal interpretations than of actual filing on rights in the various states. Without doubt, Mr. Johnson will be able to adjust many of these problems during the next few months.

1. Montezuma National Monument, Arizona:

Domestic use is from wells which are not subject to appropriation.

Beaver Creek should be appropriated for much needed irrigation. (Water from the Coolidge Dam has been refused for some reason, though the ditches bound the monument on two sides.) There is a controversy over this water, however, as there is already a diversion for an unpatented homestead, and the homesteader wishes to use the diversion as proof in his patent. Either an adjustment between the United States and this homesteader, or haste in obtaining first priority for the Park Service, seems necessary if the monument is to be protected on the irrigation of 20 acres.

2. Pipe Springs National Monument, Arizona:

These springs were first developed and used by the Mormons about 1870. An interdepartmental agreement was reached in 1933, granting 5 g.p.m. to the neighboring stockmen, 75% of the remainder (approximately 30 g.p.m.) to the Indian Service, and the remainder to the monument. Neither Mr. Pinkley nor the stockmen seems satisfied with the agreement. Disregarding the allocation of the water, further investigation is needed to determine whether proper filings have been made for appropriation by the United States.

3. Chiricahua National Monument, Arizona:

The present supply is from a spring. Further study is needed to determine whether this spring is subject to appropriation. There is also a stream which Mr. Pinkley does not regard as a necessary supply at this time. It seems possible, however, that commingling the waters of the spring and stream to make both subject to appropriation, might provide greater protection.

4. Tonto National Monument, Arizona:

A small spring on this monument does not flow beyond boundary. It has been used as watering hole, and farmers would protest fencing the area. Further investigation should be made toward protecting the monument rights.

5. Tumacacori National Monument, Arizona:

An irrigation ditch crosses the monument, but does not supply water to, or concern the monument. The monument will obtain its water from a well or precipitation.

6. Walnut Canyon, Arizona:

Water is needed, but there is only an intermittent flow in the canyon. The Santa Fe Railway Company built an impounding dam below the monument, which does not hold water. The Park Service plans a metal catchment for precipitation, but it might be well to file on an impounding dam until further study of local conditions can be made.

7. Wupatki National Monument, Arizona:

A spring of 4 to 5 g.p.m. now flows off of the monument in pipe layed in 1927 by Babbitt Brothers Sheep Company. Babbitt Brothers wish to take up the pipe, but the Park Service questions title to the pipe. Mr. Pinkley does not wish water now, but wishes to protect rights for future. He prefers having stock watered off of monument. He wishes legal advice, which Mr. Johnson will doubtless provide.

8. Kofa and Organ Pipe National Monuments, Arizona:

These prospective monuments need water. Possible sources should be studied, and appropriation made if possible.

9. White Sands National Monument, New Mexico:

It is planned to try to sink a suitable well for domestic use. The "artesian well", at the Pool of Siloam, was created by man in drilling for oil, and as such is not technically subject to appropriation.

10. Bandelier National Monument, New Mexico:

The source of supply is Frijoles Creek, which is also used by the operator to irrigate her garden in the monument. The operator claims her right through an old filing by Judge Abbott, though neither the operator nor Judge Abbott owns the land. Since it is desirable to eliminate the operator's garden, Mr. Pinkley wishes to prove the Abbott filing inactive if possible. A Park Service filing should be made, and a thorough study of its relation to the one of Judge Abbott.

11. Arches National Monument, Utah:

A small spring is to be developed, but both filing and development are dependent on acquisition of the land on which the spring is located.

12. Hovenweep National Monument, Utah and Colorado:

There is no water on the portion of the monument in Colorado, and no plan to provide any. A small spring in Utah will be needed for domestic supply, and should be filed upon. Mr. Pinkley is not sure whether the spring has been used before or not, and the matter should be investigated.

13. Yucca House National Monument, Colorado:

A small spring now serves a watering hole outside the monument by pipe. Mr. Pinkley favors maintaining the watering hole to keep stock off of the monument, but wishes to retain or establish a monument right. He has requested legal advice, which Mr. Johnson will doubtless supply.

Arizona Water Code

Portions of three days were spent in conferences with the Arizona State Water Commissioner, Mr. Stewart, and his Deputy, Mrs. Harrison, to obtain a more complete knowledge of the Code, its interpretation, and adaptation to Park Service problems.

The specific wording of the Code restricts the waters which can be appropriated to those for six uses. In the case of the parks, water for fish hatcheries and wild life watering holes cannot be recognized as beneficial use at this time. At the same time, the Commissioner wishes to liberalize the Code, and requested letters explaining the need for these uses. Superintendent Tillotson agreed to write such a letter, and it seems desirable for others to do the same if possible. Unfortunately, the number of parks and monuments with wild life problems, in Arizona, are limited.

Another complication in filing on Park Service water is the complicated system so often needed in a park, and the inadequacy of the State application form. This form was prepared previously for irrigation applications, and does not provide the mechanical flexibility for dealing with pump systems from several sources. However, Mr. Stewart approved of the use of riders until the forms can be modified.

Arizona does not recognize percolating water as subject to appropriation, but does recognize stream flow in a well defined channel, even though this water may all flow underground during much of the year. Further, springs in the bed of a stream are regarded as part of the stream, while those on a stream bank are separate springs and need separate filings unless their waters are commingled with those of the stream. Further, a spring on the stream bank which did not flow, but merely dampened the ground before development by man, is regarded as percolating water, and no more subject to appropriation than the water from a well. Precipitation or flood water, before it reaches a natural channel, belongs to the land, and is not subject to appropriation. Yet appropriation is necessary for storage, even though only in a tank or small reservoir. These interpretations make it difficult to treat many of the proposed park filings, but the Commission is anxious to liberalize its Code, and glad to accept questionable cases for submission to the State Supreme Court.

Water used prior to 1919, prior to the adoption of the Water Code, has valid rights when the use can be proved. Even though the Park Service did not make active use before that date, many of its rights are going to be influenced by earlier private use. The situation at Pipe Springs is a good example, though it cannot be fully understood until the interdepartmental agreement is studied by Mr. Johnson.

Municipal use has not been fully settled in Arizona. The Commissioner agreed that many parks have use more nearly like that of a municipality than is considered under domestic use. He has also allowed a small summer colony to file an application for municipal use, even though the 500 inhabitants are only there three months out of the year. On this basis, we have been advised to file on "Municipal and Domestic Use" for the North and South Rim Systems at Grand Canyon, in order to permit anticipating future increased demands. The acceptance of the application will then be up to the State Supreme Court, but in any case, priority will date from the date of the application by the Park Service.

Applications

On December 9, while Superintendent Tillotson was in Phoenix, an application was filed on the Indian Gardens water supply for the South Rim of Grand Canyon. The map to accompany this application will be filed within the next thirty days. It needed certain additions, the data for which was obtained from the Santa Fe Railway Company in Los Angeles on the return trip to San Francisco.

Conclusions

From the data obtained, two types of problems are involved in the water right filings for Arizona. Grand Canyon requires a great deal of routine work to be done in compiling the necessary maps. There is full justification for a draftsman to prepare the complicated tracings. There are between two and three months steady work for a draftsman and myself. Although the Southwestern Monuments will also require maps, they will be relatively simple in comparison with the legal investigations with which Mr. Johnson is more familiar.

CC: Director.
Mr. Tillotson.
Mr. Pinkley.
Mr. Kittredge.
Mr. Dunn.

12-14-1936: letter to grca superintendent from nps regarding has all the necessary data for extending the water line to the elevated

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Branch of Land Acquisition and Regulation
Legal Division
110 Sutter Street
San Francisco, Calif.



December 14, 1936.

Mr. M. R. Tillotson,
Superintendent,
Grand Canyon National Park,
Grand Canyon, Arizona.

Dear Mr. Tillotson:

This is to report that Mr. Davenport, of the Office of the Chief Engineer of the Santa Fe Railway Company, was able to give me all the necessary data for extending the water line to the elevated water tank at the South Rim, Grand Canyon, as requested by the State Water Commissioner, for the filing on the Indian Gardens water system. I shall, therefore, complete the map immediately to accompany the filing we made in your company last Tuesday.

When we explained the purpose of water right filings, Mr. Davenport brought up a proposed power plant at Phantom Ranch, to generate 30 to 60 K.V.A., which he says should be built during the next five years. Please advise whether you wish to file on this project, and if so on just how much water. We do not know what head is actually contemplated, but suggest that 5 or 6 second feet with a 100 foot head might be desirable from our standpoint, in order that the water will all be appropriated in Bright Angel Creek. We can then modify the filing later if the design is prepared for less water and a higher head.

I do. Check with Nelson as to approx. amt.

FROM		TO
	Superintendent	
	Assistant Superintendent	
	Chief Clerk	
	Purchasing Clerk	
	Warehouseman	
	Cost Accountant	
	Timekeeper	
	File Clerk	
	Stenographer-Secretary	
	Senior Inspector	✓ O.M.C.
	Park Engineer	
	Chief Ranger	
	Asst. Chief Rangers Collins-Brown	
	North Rim Ranger	
	Information Desk	
	Park Naturalist	
	ECW Landscape Foreman	
	ECW Engineer S. R.	
	ECW Wildlife Technician	
	ECW Supt. N.?	
FOR	Action	
	Comment: Verbal	
	Comment: Memorandum	
	Engineer reply for Supt. Sign	✓

Sincerely yours,

A. van V. Dunn

A. van V. Dunn,
Associate Engineer.

11-21-1936: letter to grca superintendent from regarding additional instructions from washington to file on water rights at grand ca

FILE COPY

November 21, 1936.

Mr. M. R. Tillotson,
Superintendent,
Grand Canyon National Park,
Grand Canyon, Arizona.

Dear Mr. Tillotson:

We have just had additional instructions from Washington to file on water rights at Grand Canyon as soon as possible, and Mr. Dunn is now preparing certain plans in accordance with the State requirements for such filings. We find, however, that certain additional data and explanation will be necessary before completing the necessary papers for these filings, and should appreciate your check of quantities.

We propose to file on 323,000 gallons a day at Indian Gardens for the South Rim water system, and we have the data necessary for the map for such filings except that the line should be tied to a section corner. We find that you have located the corner common to Sections 23, 24, 25, and 26 on the topography of the golf course area south of the administration area. We should appreciate the coordinates which Mr. Carrell used for plotting this section corner and those for the center of the large storage reservoir or of Station 0+00 of the Harvey pipe line on the valve box on this reservoir in order that we may compute a tie to the section corner. We must also know the type of pump and motor and their capacities at each the main pump station and the rehandling station in Indian Gardens.

On the North Rim we should like to combine several of the water rights if possible, but are somewhat uncertain as to the practicability. As we understand it, the Union Pacific hydro plant and Phantom Ranch areas both derive their water from Bright Angel Creek, and it might be possible to cover them with one filing even though there would be two points of diversion. The quantity of water would be 5 second feet for the hydro electric power and 1-1/3 second feet for Phantom Ranch. Of this latter, 1/2 second foot or 323,000 gallons a day to be for domestic use, and the balance for irrigation, with the idea that some of the irrigation water might later be converted to domestic use to augment the supply from Indian Gardens and the South Rim.

In order to file on any of this water for irrigation we will have to show an adequate acreage to justify the quantity, and should appreciate an estimate of the land that can be so irrigated.

In preparing the maps for the Bright Angel rights we will have to obtain maps showing the actual alignment and points of diversion as they have been constructed, and find no such data in the office of the Chief Engineer. Probably a print of the Union Pacific maps for the hydro plant and the Harvey map at Phantom Ranch would supply this data.

In addition we should know the size of penstock, theoretical horse power of the generator unit and types of wheel and generator used, the size and description of the pumps and motors and size of pipe at Phantom Ranch, also the size of ditch, grade, and type of diversion works used on the irrigation system.

We are not quite clear on the use of Roaring Springs, but gather that it is used for all domestic water on the North Rim, and is to be used in the near future for a fish hatchery besides, and that you recommended a half second foot as the quantity. We find, though, that the flow is approximately 7½ second feet, and wonder if it would not be better to file on 1 or 2 second feet in order to have ample supply in the future. In order to prepare the necessary papers for this filing, we shall need a plan or map of the existing water system and descriptions of pumps and motors as described for the other systems above mentioned.

At Clear Creek Canyon we propose to file on 1/4 second foot for domestic and irrigation purposes if you think that is ample for all future needs, but we will need a map giving pipe lines and diversion works to complete our filings on this system.

We are planning to file on all impounding reservoirs for wild life as one filing to include twelve such dams or reservoirs on the South Rim and four on the North, with 165 acre feet on the South Rim and 6 acre feet on the North. To complete these filings we should have an approximate storage capacity for each individual reservoir, and the dimensions of the dam in each case.

We notice, too, in your descriptions of those on the South Rim including those at Ermanita Mesa, Horse Thief, Pasture Wash, etc., you have given their location in quarter sections. The State requires locations by 40-acre subdivisions where possible, and we wonder if you could supply this additional data. In any case we will need some means of locating those you contemplate on the North Rim and the name for each.

We notice you also wish to file on 50 gallons a minute from various springs on the North Rim for wild life purposes, and we should have specific locations and descriptions of the proposed diversions in these cases. In this connection we also have a record of the possible source of supply at Neal Spring, but no data as to what this use was to be or the quantity of water contemplated.

Mr. Dunn and I are planning to be in Arizona shortly after Thanksgiving to discuss some matters with the State Water Commissioner, and can probably have some of the questionable matters listed above explained at that time if we stop at Grand Canyon, but we should like to have as much explained by letter as possible in order that we can have our filings in rough form when we come south.

Inasmuch as the hydro plant and domestic water supply for the North Rim belong to the Union Pacific Railroad, and those at the South Rim and Phantom Ranch belong to the Fred Harvey Company, we wonder if it will not be possible for you to get them to pay the filing fees necessary for these systems.

Sincerely yours,

Albert L. Johnson,
Associate Attorney.

A.van V.D:SH

CC: C. M. Carrel, Park Engr.
A. van V. Dunn, Assoc. Engr.

11-21-1936: letter to nps from attorney regarding filings for grand canyon and determination as to any other necessary arizona filir

Conn 660-05.7
Joshua Tree
FILE COPY

November 7, 1936.

The Director,
National Park Service,
Washington, D. C.

Dear Mr. Director:

As suggested by Mr. Tolson while in San Francisco and as authorized by you, Mr. Johnson was specially assigned to search land titles in the Land Registry Office at Los Angeles for the determination of possible land exchanges at Joshua Tree National Monument. Mr. Johnson has filed his report in duplicate with the Branch of Engineering here in San Francisco, and I assume you will receive a copy through that office.

It was deemed more economical to have Mr. Johnson proceed from Los Angeles to Grand Canyon to prepare the ground work for proper filings for that park, and the result of his short stay there is outlined in his memorandum to me of November 6, a copy of which is herewith enclosed.

It occurs to me that now is an opportune time to make proper filings for Grand Canyon National Park for the reason that the State of Arizona should welcome all appropriative filings and beneficial use of water within its boundaries as an aid to adding greater merit to its position in its contest with the six signatory States to the Colorado River Compact. This fact presents an opportunity for generous filings wherever necessary in Arizona, which I feel should not be allowed to pass.

As stated in the last paragraph of Mr. Johnson's memorandum, we will proceed with filings for Grand Canyon, and at the same time make a determination as to any other necessary Arizona filing.

Yours very truly,

Joseph E. Taylor,
Attorney.

Encl.
JET:SH

CC: Supt. Tillotson.
Mr. Kittredge.

11-06-1936: memorandum to joseph e. taylor from nps regarding latest developments on water rights

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
BRANCH OF LANDS AND USE
110 SUTTER STREET
SAN FRANCISCO, CALIF.

November 6, 1936.

MEMORANDUM TO MR. JOSEPH E. TAYLOR:

Pursuant to advice from you I made an inspection trip last week to Grand Canyon National Park for the purpose of learning the latest developments on their water rights. It was thought it would be more economical to make this trip from Los Angeles at the conclusion of my special assignment on searching land titles in the Land Registry Office at Los Angeles pertaining to the Joshua Tree National Monument.

Being advised by you and also by the Acting Superintendent of Grand Canyon that Superintendent Tillotson was away from the Park during the first part of my fifteen-day stay in Los Angeles, I wrote the Park asking them to keep me advised as to the date of his expected return. I received word from the Assistant Superintendent about October 21 that Mr. Tillotson would probably be in the Park the last week in October, and asking me to wire when I could come; so I telegraphed on October 26 stating that I would be through with the work in the Land Office on the 27th of October. The Assistant Superintendent telegraphed me to wire them time of arrival. On Tuesday, October 27, I wired that I would leave the next day and be there Thursday morning.

Immediately upon my arrival at Grand Canyon National Park I went to the Superintendent's office and called on Mr. Tillotson in person. He seemed surprised at my arrival, and had no suggestions to offer. However, I learned from him and from the Park Engineer the following day that the status of water rights was the same as when you were in the park in 1935. You and the Park Engineer had then agreed upon a number of filings -- at least six -- which would be required for laying the foundation and perfecting the rights to water now used by the National Park Service at Grand Canyon. I agree that these filings should be made, although there has been no disturbance of the Government water rights nor protest by any private interest. The Superintendent seemed well satisfied that there was no possibility, either physical or legal, of interference with the Government's water rights, although he stated he was not familiar with Arizona law. There are only three or four private owners on the South Rim within the boundary of the national park, but I understood from my short investigation there that those private owners were very jealous of the Government's rights and chary of the National Park Service.

Since the status of affairs at Grand Canyon National Park is largely the same as in 1935 when you made a preliminary investigation, and it is agreed by the attorneys and the Park Engineer that it would be better for the Service to make these filings with the constituted water authority of the State of Arizona, we are about to prepare the necessary applications for the Superintendent to sign, and will then file in person at Phoenix, Arizona. It will be necessary to make a further investigation at the Park and at Phoenix to complete the engineering data for the applications to appropriate water.

Albert L. Johnson,
Associate Attorney.

CC: Director.

06-03-1935: letter to attorney from nps regarding reference to recent conversation and discussion relative to the securing from the

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
GRAND CANYON, ARIZ.

June 3, 1935

Joseph E. Taylor, Attorney
Yellowstone National Park
Wyoming

Dear Mr. Taylor:

With reference to our recent conversation and discussions relative to the securing from the State of Arizona water rights for Grand Canyon National Park and Grand Canyon National Monument, I wish to make the following recommendations:

1. That a complete survey of the records be made to determine what, if any, prior filings for water rights in this Park and the Monument are recorded;

2. That necessary filings for water rights for both this Park and the Monument be made at the earliest possible date;

3. That, to insure an adequate water supply for the South Rim from the springs at Indian Gardens, filing should be made for 200,000 gallons per day. To provide for the possibility of failure of the Indian Gardens springs and the necessity of procuring this supply from Bright Angel Creek, filing should be made for one and one-third second feet. This will provide water not only for the South Rim but also all use at Phantom Ranch;

4. That filing should be made for 150 acre feet of run-off water on the South Rim from various tributaries of the Colorado River, which is and will be impounded for the purpose of caring for wildlife, and domestic use at outlying stations where direct precipitation is caught on galvanized catchment areas and stored in reservoirs;

5. That filing should be made for one-half second feet of water from Roaring Springs to provide an adequate supply for use at the North Rim Headquarters Area and for a proposed fish hatchery in Roaring Springs Canyon. It will also be necessary to file for five second feet from Bright Angel Creek for hydroelectric power development at mounth of Manzanita Creek. A

portion of this will again be utilized for domestic and irrigation purposes at Cottonwood camp, one mile below the power plant;

6. That filing should be made for one-quarter second feet of flow from Clear Creek for domestic and irrigation purposes at camp ground to be established in Clear Creek Canyon on the north side of the Colorado River;

11 — 7. That filing should be made for fifty gallons per minute from various springs on the North Rim for preservation and propagate wildlife. Also, filing should be made for six acre feet per year of precipitation and run-off for domestic and wildlife purposes. (9) — 15

Referring to item (3), providing for an additional water supply for the South Rim Headquarters Area from Bright Angel Creek, would advise that in my answer of February 20, 1935, to a letter from the Director of February 7, 1935, I made mention of the feasibility of this project, estimated to cost some $100,000.00. As stated in my letter, this would be a very expensive piece of construction and would require, probably, two years to install.

In this same letter, I touched upon the necessity of renewing the present two inch line now serving Phantom Ranch from Bright Angel Creek with a three inch line and, also, the advisability of relocating the two inch line serving the C. C. C. camp from the Creek bed to connect with the Phantom Ranch line at the existing reservoir.

Item (4) provides for run-off or flood waters carried by various draws lying to the southwest, south, and southeast of the South Rim Headquarters, in which twelve dirt and log dams have been constructed to impound these waters in dirt tanks for wildlife use. Three more dams and tanks are proposed for construction but not programmed. This item also provides for impounding direct precipitation for domestic use at Pasture Wash and Desert View.

Item (5) provides for water necessary for domestic use and fire protection of the North Rim Headquarters Area, jointly occupied by the Union Pacific Railroad and the National Park Service. Provision is also made for the use of water for a proposed fish hatchery as mentioned in my letter to the Director of February 20, 1935. In addition to these, it is necessary to provide water from Bright Angel Creek for hydroelectric power, diversion occurring one-half mile above the power plant by means of a 26" wood stave penstock and returning to the Creek at the plant. This electric energy is transmitted to the North Rim Headquarters Area and jointly used

06-03-1935: letter to attorney from nps regarding reference to recent conversation and discussion relative to the securing from the

by the Union Pacific Railroad and National Park Service.

Diversion of this water again occurs one mile below the power plant at Cottonwood by means of irrigation ditches and pipe.

Item (6) makes provision for the use of water flowing in Clear Creek to be utilized for domestic and irrigation purposes. A new trail has just been completed from Phantom Ranch to Clear Creek, and it is proposed to establish a fishermen's camp in the Clear Creek Canyon, providing the usual camp facilities.

Item (7) embraces certain live springs on the North Rim, some of which have been developed, and others in their natural state. Little or no new development is contemplated but the flow in these springs should be protected for wildlife.

Filing for 920 acre feet has been made for run-off and flood waters from Toroweep Valley in Grand Canyon National Monument. It is estimated that this will be sufficient for present and future needs for domestic use at the Headquarters Area, and wildlife purposes.

Two corrected copies of your tabulations are herewith returned.

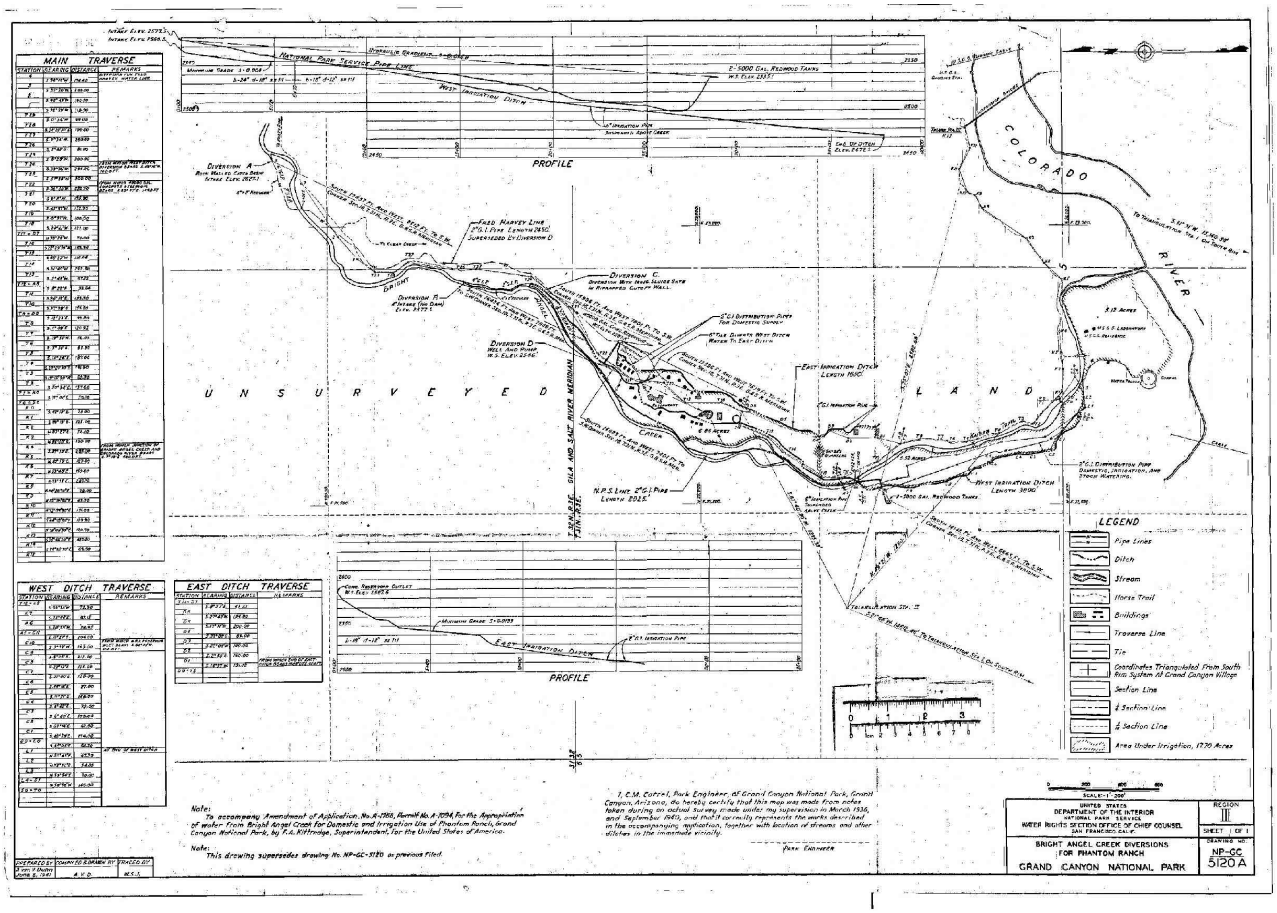
Very truly yours,

M. R. Tillotson,
Superintendent.

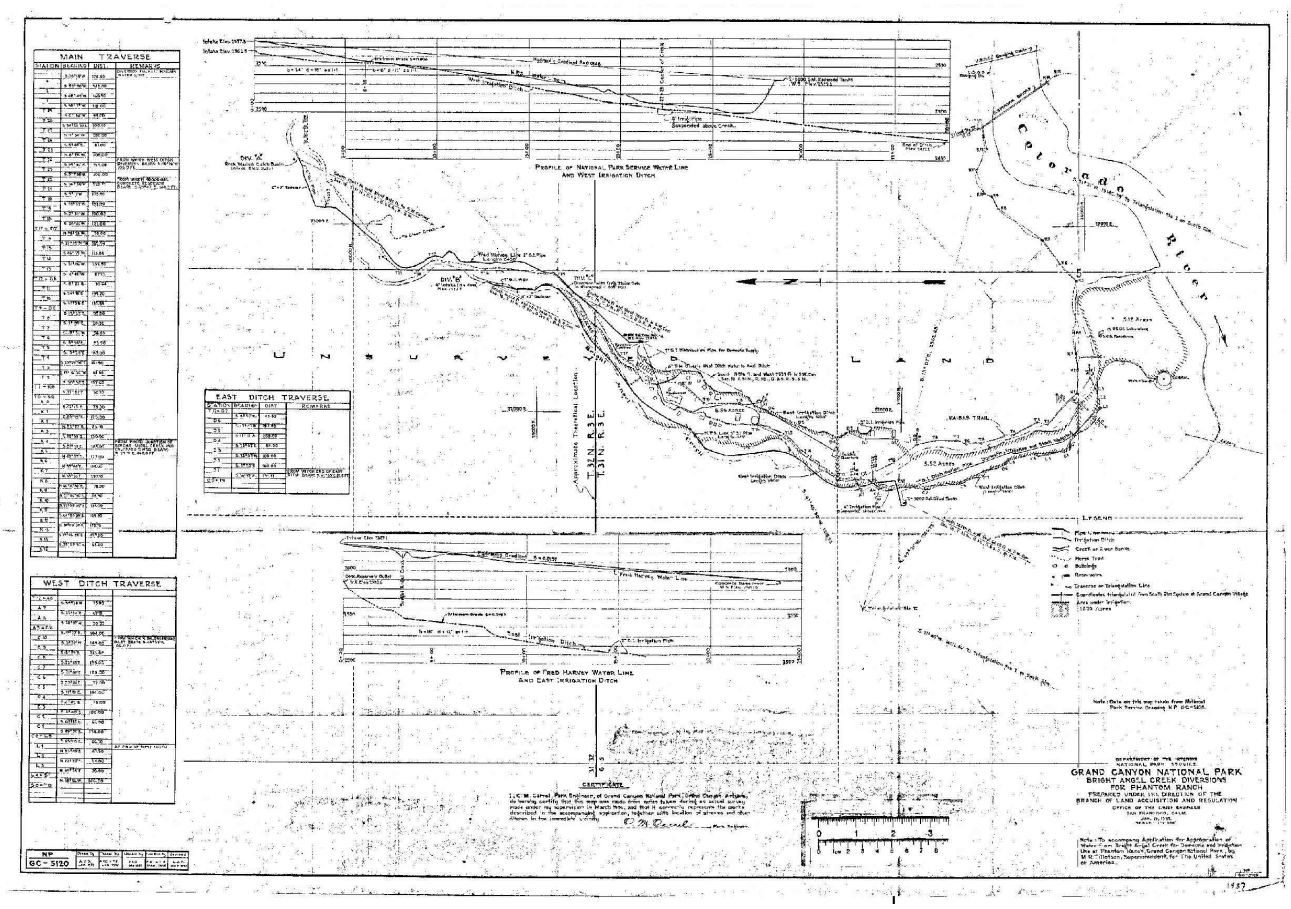
cc-Mr. Taylor
The Director

Maps and Miscellaneous Information

06-06-1941: map of the bright angel creek diversion for the phantom ranch



01-19-1937: map of the bright angel creek diversion for the phantom ranch



Docket Information

Number of Documents in Docket 235

Documents Dated from 6/3/1935 to 11/14/1974

Docket Compiled: 3/24/2011